



## Solar Pumping System

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Shenzhen Dolycon Technology Co.,LTD.

# COMPANY PROFILE

Shenzhen Dolycon Technology Co., LTD, established in 2015, is one of professional variable frequency drive manufacturers and solar water pumping system provider in China. Based on strong R&D ability and leading technology, Dolycon focus on solar pumping system, committed to provide excellent and reliable products and solutions for customers at home and abroad.

Our products have passed CE,ISO9001:2015 and acquired many technical patents,meeting internal&external requirements of different regions.

Our products enjoy good sales all over the world with excellent quality.

All Dolycon products should go through strict quality control procedures from customer requirement review, production process control, service correction to system improvement etc. All of these processes reflect our craftsman spirit, as we always provide the best products to customers.

Dolycon has a strong R&D team and a powerful management group with professional and experienced members. Due to their perseverance, innovation and advanced technical knowledge, more stable and advanced high-quality products in Dolycon continue to appear on the market.



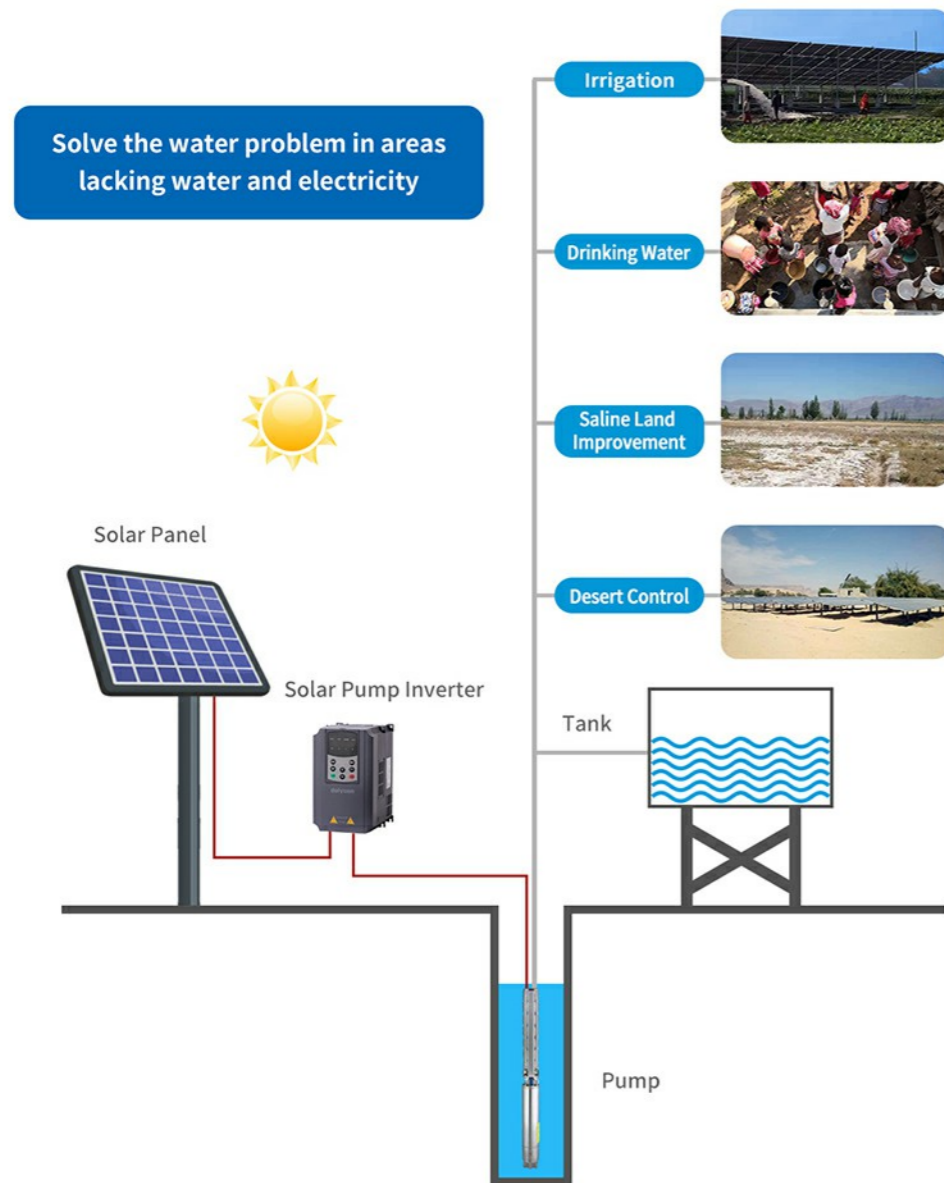
# HONORS



## SOLAR PUMPING SYSTEM

The solar pumping system uses solar energy as power to drive water pumps to pump water from deep wells, rivers, lakes, reservoirs and other water sources. The system is mainly composed of three parts: solar panel, solar pump inverter and water pump.

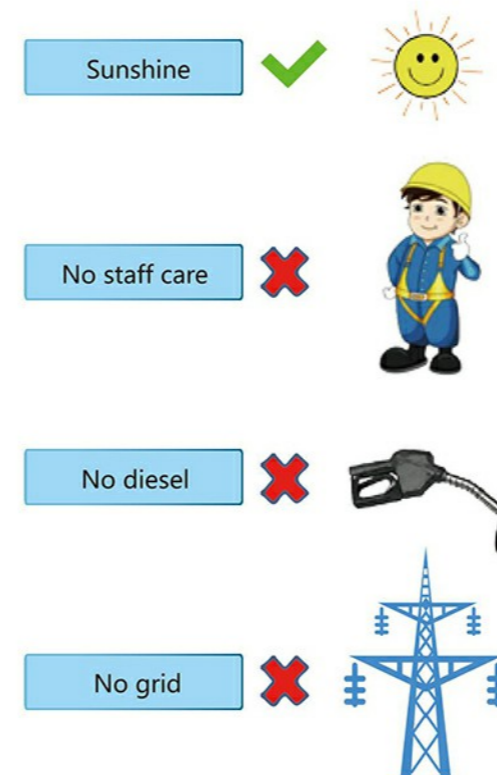
Solar pumps use long-lasting energy from the sun. They work at sunrise and rest at sunset. No diesel, no power grid, and no need for manual duty. The system doesn't need energy storage batteries, and the economic and environmental protection concept of replacing electricity storage with water directly drives the water pump to raise water, which greatly saves the cost of system construction and operation and maintenance.



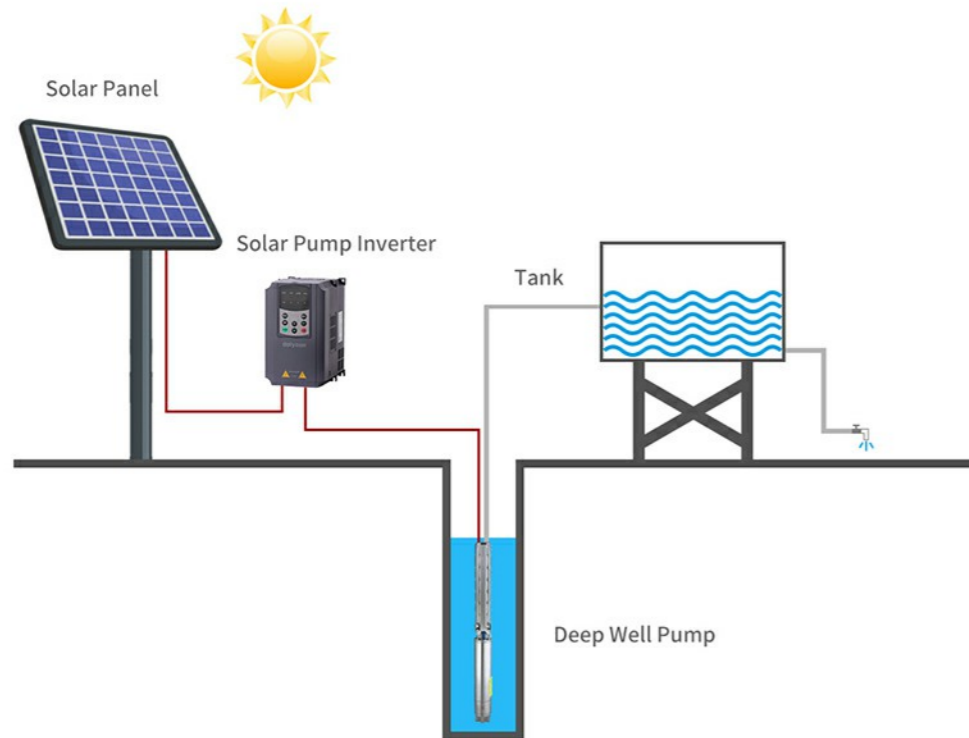
## ADVANTAGES OF SOLAR PUMPING SYSTEM

- The solar pumping system runs fully automatically, no manual duty is required, and only a small amount of daily manual maintenance is required;
- No need for batteries or building a control room;
- Possess high-efficiency low-light work function to ensure water consumption in cloudy and cloudy days;
- Compatible with AC input;
- Internet of things control system, remote control and monitoring of pumping water;
- New MPPT control technology and industry-leading inverter technology to ensure the maximum efficiency of the system using solar power generation;
- According to the water demand and local sunshine conditions, the system is designed to achieve high water extraction efficiency and reduce customer input costs as much as possible;
- It can be used with irrigation facilities such as drip irrigation, sprinkler irrigation and infiltration irrigation to effectively solve the problem of arable land irrigation, increase production, and save water.

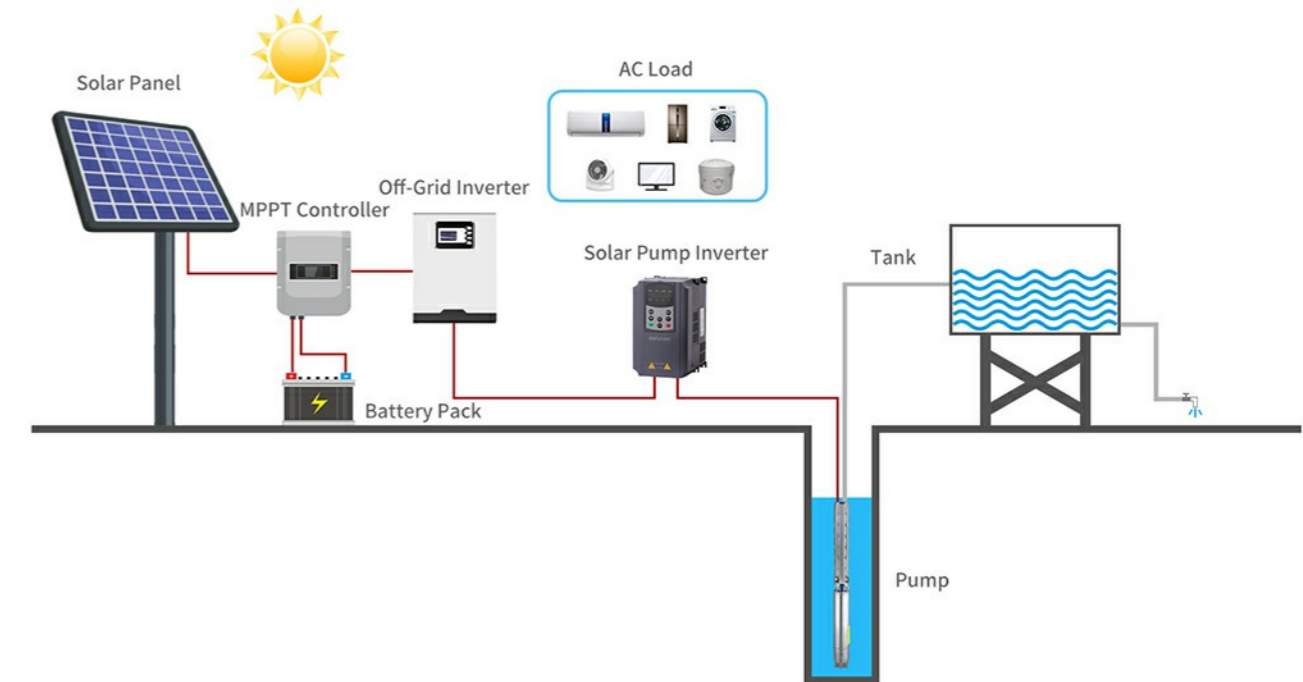
Yes, greatly reducing input costs



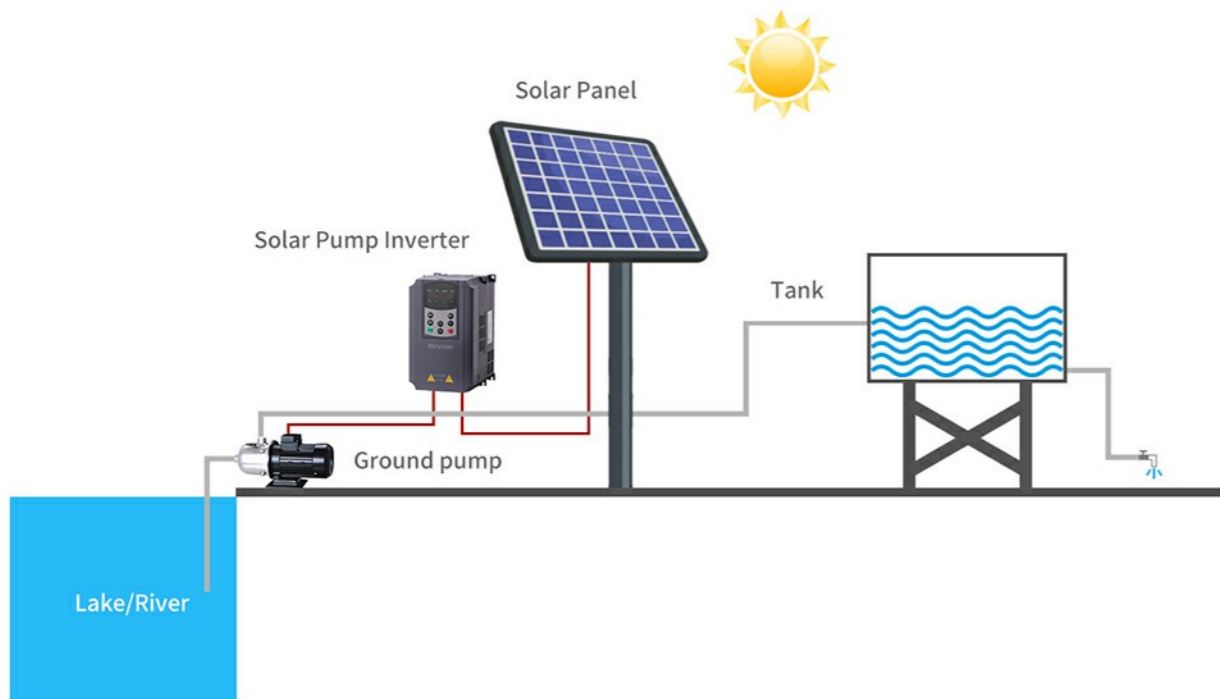
## SOLAR PUMPING SYSTEM OF DEEP WELL PUMP



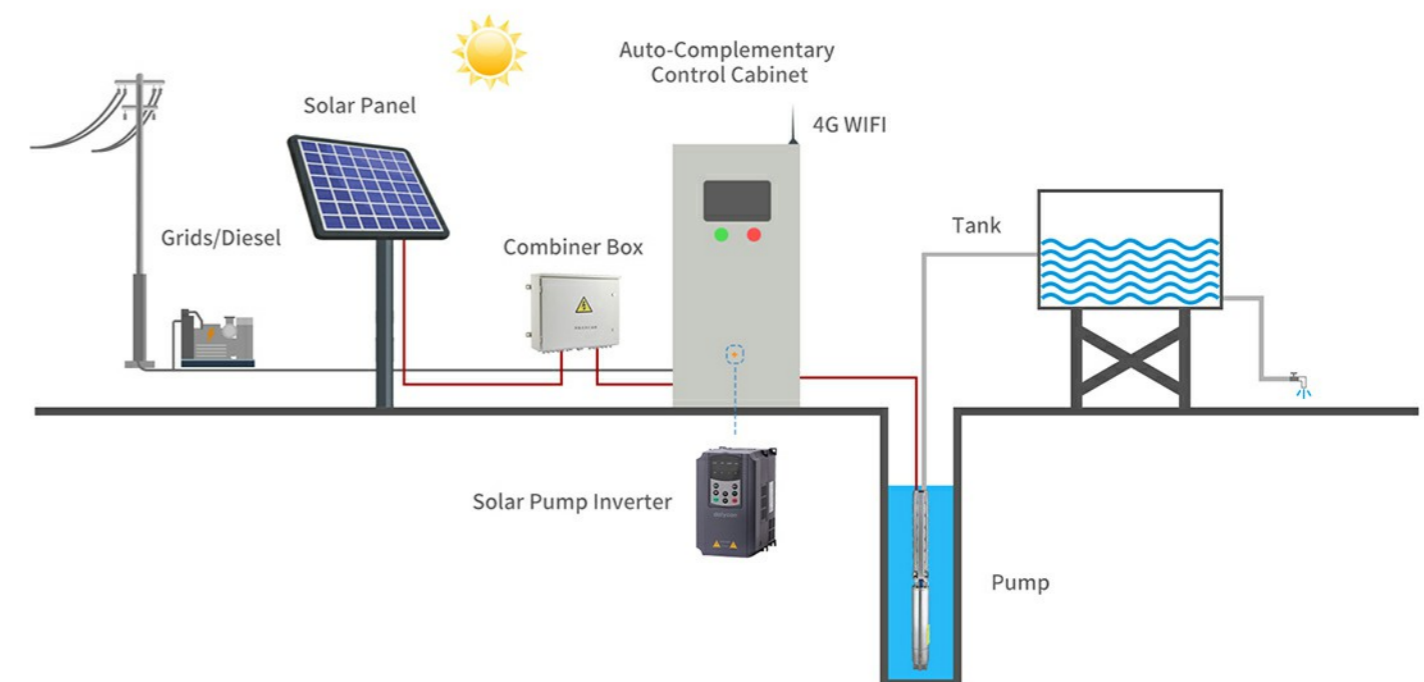
## SOLAR OFF-GRID SYSTEM + SOLAR PUMPING SYSTEM



## SOLAR PUMPING SYSTEM OF GROUND PUMP



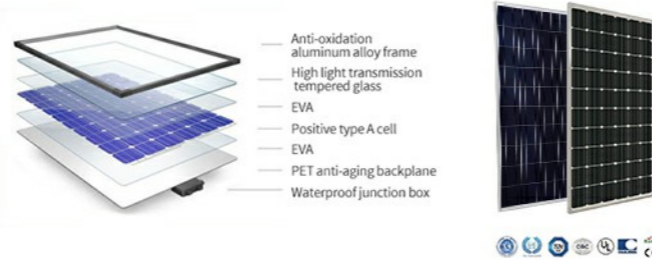
## GRIDS/DIESEL AUTO-COMPLEMENTARITY + SOLAR PUMPING SYSTEM



# SOLAR PUMPING SYSTEM ACCESSORIES

## Solar Panels

- One time investment, lasting more than 25 years
- Good low light performance, high conversion rate
- High light transmittance, anti-deformation
- Anodized thickened aluminum alloy frame, resistant to oxidation and corrosion



## Mounting Bracket

- Fixed Mounting Bracket: Low installation cost; easy to install in different positions; materials can be selected according to requirements
- Mounting Tracking Bracket: Through real-time tracking of the sun's rays, to obtain the maximum power generation, suitable for use in various latitudes



## Solar Pump Inverter

Manufacture based on world-class components

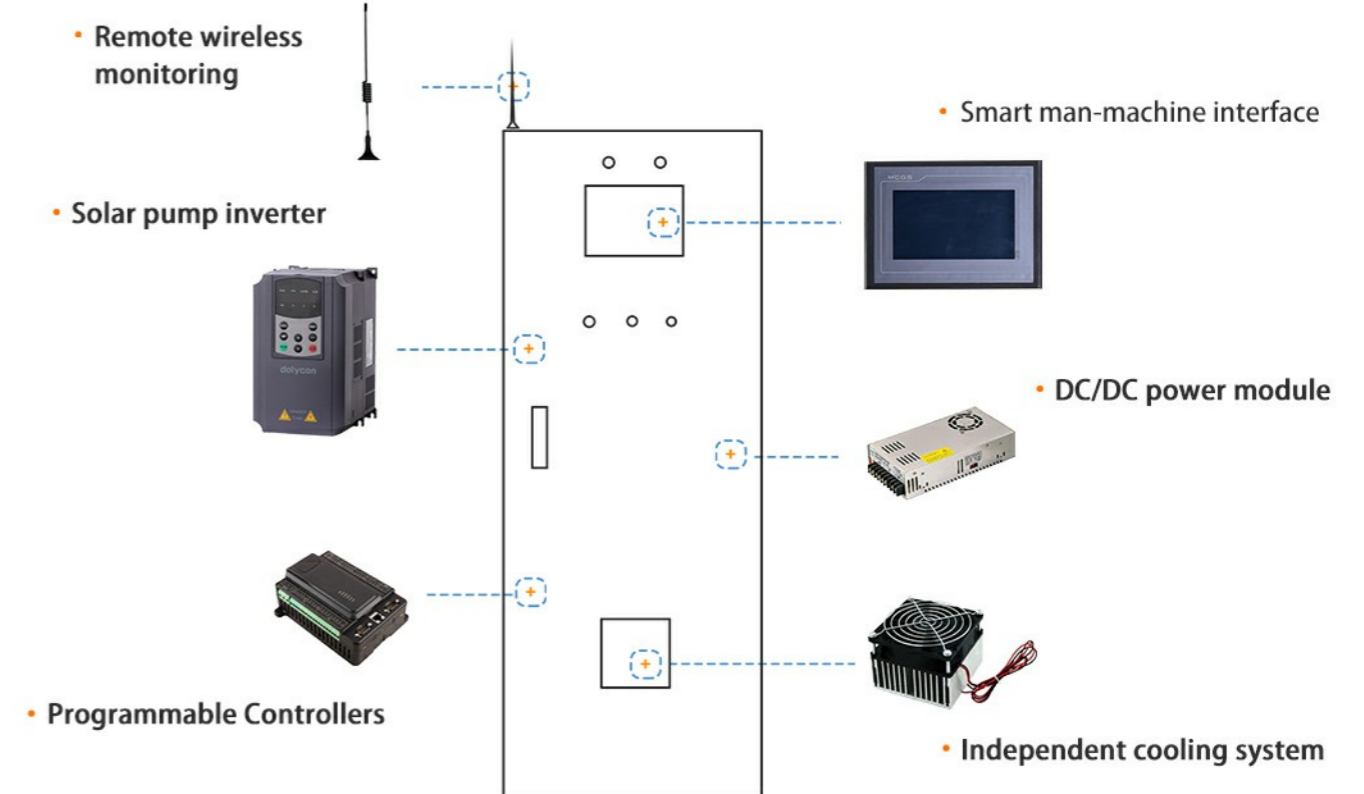
- High-speed high-performance control DSP core control unit
- Stable multi-function terminal
- Low speed and high torque
- Asynchronous motor
- Automatic voltage regulator (AVR) function
- Multiple fault protection



## Experienced R&D Team

- Products have obtained a number of national authoritative certifications and patents
- More than 10 years of experience in R&D and application of solar pumping system and inverters
- Team members have accumulated a lot of field application experience at home and abroad
- Rich experience in non-standard design

## Solar Control Cabinet



## AC Water Pump

- Process technology of advanced countries in the world
- High efficiency, long service life, stable operation
- Use different types of water pumps according to actual system requirements and installation conditions
- Lifting head: 10m~700m
- Flow rate: 1.8m<sup>3</sup>/h~500m<sup>3</sup>/h



## PV Combiner Box

Solar pumping system of 3 and above module arrays all use Dolycon PV combiner box to ensure safety and reliability.

- Overcurrent, overvoltage and lightning protection functions
- Maximum input DC voltage: 1000Vdc
- Maximum input current: 10A
- Protection level: IP65
- 8/12/16/24V input voltage optional



### ☞ Liquid Level Probe/Float

dolycon

- Small size, long life, simple structure
- Water pump idling and overflow protection
- Detect the water level to prevent the pump from pumping dry
- When the highest water level is reached, the photovoltaic water pump inverter will stop to save energy and water



### ☞ Output Reactor

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Special output reactor for high solar pump inverter, used to filter out harmonic voltage and harmonic current, and improve the quality of power grid

- High temperature resistance, low noise, good linearity and unsaturated
- Rated working voltage: 380V/440V 50Hz
- Rated working current: 5A~1600A
- Dielectric strength: iron core-winding 3000VAC/50Hz/50mA/10s



### ☞ 4G Internet of Things Module

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- Low power consumption design, small size
- Support GSM, NB-IOT, 4G full Netcom network communication
- Real-time data transmission, allowing users to understand the on-site situation in time
- Support 7~24VDC power supply, and with anti-reverse connection protection
- Support Modbus TCP, MQTT protocol, can access cloud platform
- Support temperature and humidity sensor, temperature sensor, RS485/TTL



### ☞ Remote Electric Valve

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- Excellent sealing performance, large flow capacity, small flow resistance coefficient
- Small and light, easy to disassemble and repair, and can be installed in any position
- Simple and compact structure, rapid opening and closing of 90° slewing
- Small operating torque, labor-saving and lightweight
- The flow characteristics tend to be straight, and the adjustment performance is good
- Nominal diameter DN (mm): DN15~DN250
- Nominal pressure: PB11.0/1.6/2.5/4.0/6.4MPa



### ☞ Electromagnetic Flowmeter

dolycon

- LCD low power consumption display, instantaneous flow, working status, alarm prompt
- Imported high-precision chips, with a long-term accuracy of 0.5 level
- Strong anti-corrosion ability and long service life
- Measuring range: 0.08-4.24m<sup>3</sup>/h 53.01-1650.72m<sup>3</sup>/h
- Nominal diameter: DN10-DN2000
- Output signal: 4~20mA, 485 protocol, HART protocol



### ☞ Pressure Sensor

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- Small size, light weight, high accuracy, good temperature characteristics
- Pressure range: -100kPa~0~100MPa
- Output signal: 4~20mA, RS485
- Accuracy grade: ±0.2%FS, ±0.5%FS
- Long-term stability: ≤0.2%FS/year
- Power supply voltage: 12-28VDC



### ☞ Pressure Gauge

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- Accurate measurement, long life and low maintenance
- One-key switch/one-key calibration function, simple operation
- Real-time display of measured value, fast reading
- Standard 0.4 grade high precision
- Range: vacuum to 60MPa



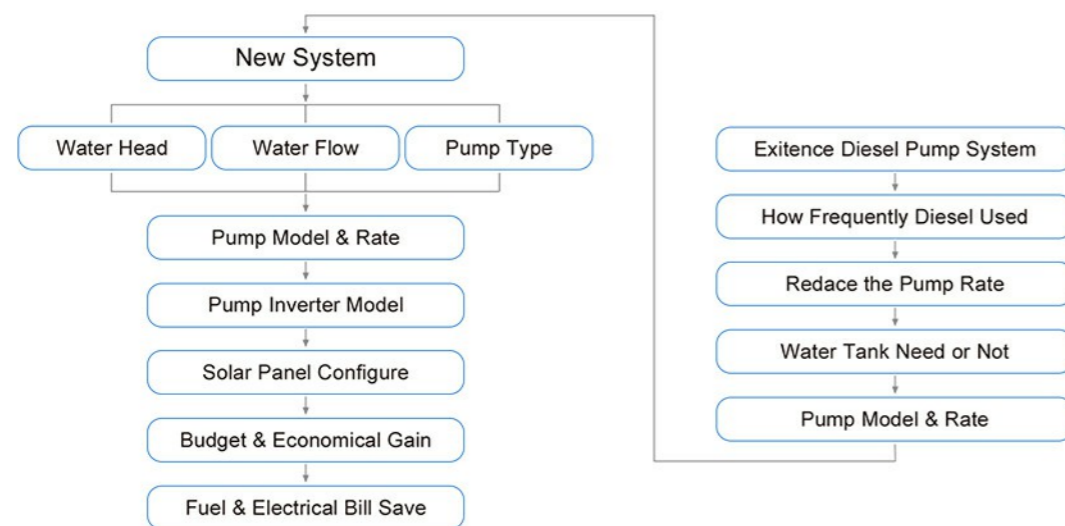
Solar Pumping System  
Customized Services



# AC Water Pump System Configuration

For the optimal pumping solution, we need following on-site information:

- 1) Installation country or local latitude and longitude (the sunshine situation);
- 2) Daily water requirement (hourly flow based on local average sunshine time);
- 3) Distance from the water source to the installation of the inverter, Pipe length  
Distance from the solar panels to the inverter, Reservoir height;
- 4) Water source (source of water <well water, river water, pond water>, water quality...)



## Daily water requirement: 5~10 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP1-21	1.1	1.1	1.65	5*1	1	108	7	0.8~1.8	112	80	7	10
DOLY-SP1-25	1.1	1.1	1.98	6*1		129	7		134	95	6	10
DOLY-SP1-28	1.5	1.5	1.98	6*1		145	7		150	107	7	10
DOLY-SP1-32	1.5	1.5	2.31	7*1		165	6		171	122	6	9
DOLY-SP1-36	1.5	1.5	2.31	7*1		186	6		192	137	6	9
DOLY-SP1-39	2.2	2.2	3.30	5*2		202	8		209	149	7	11
DOLY-SP1-42	2.2	2.2	3.30	5*2		217	7		225	160	7	10
DOLY-SP1-46	2.2	2.2	3.96	6*2		238	8		246	176	7	11
DOLY-SP1-50	2.2	2.2	3.96	6*2		260	7		269	192	6	10

## Daily water requirement: 10~20 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP3-15	1.1	1.1	1.65	5*1	3	61	17	2.4~3.6	72	47	14	20
DOLY-SP3-18	1.1	1.1	1.98	6*1		74	16		87	57	14	19
DOLY-SP3-22	1.5	1.5	1.98	6*1		91	15		106	70	13	18
DOLY-SP3-27	2.2	2.2	3.30	5*2		111	18		130	87	16	21
DOLY-SP3-32	2.2	2.2	3.30	5*2		131	18		154	102	16	21
DOLY-SP3-38	3.0	3.0	3.96	6*2		157	17		183	122	15	20
DOLY-SP3-43	3.0	3.0	4.62	7*2		178	17		207	139	15	20

## Daily water requirement: 10~30 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP5-12	1.1	1.1	1.65	5*1	5	45	24	3~5.5	59	38	18	26
DOLY-SP5-17	1.5	1.5	1.98	6*1		64	22		84	54	17	24
DOLY-SP5-21	2.2	2.2	3.30	5*2		79	27		104	67	20	29
DOLY-SP5-25	2.2	2.2	3.30	5*2		94	26		124	80	20	29
DOLY-SP5-29	3.0	3.0	3.96	6*2		108	26		144	92	19	29
DOLY-SP5-33	3.0	3.0	4.62	7*2		123	26		163	105	19	28
DOLY-SP5-38	4.0	4.0	5.28	16*1		142	28		188	121	21	30
DOLY-SP5-43	4.0	4.0	5.61	17*1		161	26		213	137	20	29

## Daily water requirement: 30~60 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP8-7	1.1	1.1	1.65	5*1	8	27	41	6~10	31	20	33	53
DOLY-SP8-10	1.5	1.5	1.98	6*1		39	38		45	29	31	49
DOLY-SP8-12	2.2	2.2	3.30	5*2		47	47		54	35	38	61
DOLY-SP8-15	2.2	2.2	3.30	5*2		59	43		68	44	35	56
DOLY-SP8-18	3.0	3.0	3.96	6*2		71	41		81	53	34	53
DOLY-SP8-21	4.0	4.0	5.28	16*1		83	49		95	62	41	64
DOLY-SP8-25	4.0	4.0	5.61	17*1		99	44		113	74	37	57
DOLY-SP8-30	5.5	5.5	9.24	14*2		119	49		136	88	40	64
DOLY-SP8-37	5.5	5.5	9.90	15*2		147	40		167	109	33	52
DOLY-SP8-44	7.5	7.5	10.56	16*2		174	44		199	129	36	58
DOLY-SP8-50	7.5	7.5	11.22	17*2	198	41	226	147	34	53		

## Daily water requirement: 60~150 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP17-2	1.1	1.1	1.65	5*1	17	13.5	96	10~20	19	10	63	112
DOLY-SP17-3	2.2	2.2	3.30	5*2		20.5	127		28.5	16	84	146
DOLY-SP17-4	2.2	2.2	3.30	5*2		28	109		38	22	73	124
DOLY-SP17-5	3.0	3.0	3.96	6*2		35	99		48	28	66	112
DOLY-SP17-6	4.0	4.0	5.28	16*1		42	116		58	34	77	129
DOLY-SP17-7	4.0	4.0	5.61	17*1		49	106		67	40	71	117
DOLY-SP17-8	5.5	5.5	9.24	14*2		57	121		77	45	80	136
DOLY-SP17-9	5.5	5.5	9.90	15*2		64	108		87	52	71	118
DOLY-SP17-10	5.5	5.5	9.90	15*2		72	96		97	58	65	108
DOLY-SP17-11	7.5	7.5	10.56	16*2		79	115		106	64	79	128
DOLY-SP17-12	7.5	7.5	11.22	17*2		87	105		115	70	72	117
DOLY-SP17-13	7.5	7.5	11.22	17*2		95	101		125	75	70	115
DOLY-SP17-14	9.2	9.2	13.86	14*3		102	115		134	81	80	130
DOLY-SP17-15	9.2	9.2	13.86	14*3		109	108		144	87	74	121
DOLY-SP17-16	9.2	9.2	14.85	15*3		116	107		154	92	73	121
DOLY-SP17-17	9.2	9.2	14.85	15*3		123	101		163	98	69	114
DOLY-SP17-18	11.0	11.0	15.84	16*3		130	105		173	104	72	118
DOLY-SP17-19	11.0	11.0	15.84	16*3		138	99		182	110	69	112
DOLY-SP17-20	11.0	11.0	15.84	16*3		145	99		192	116	68	111
DOLY-SP17-21	13.0	13.0	19.80	15*4		152	103		202	121	71	116
DOLY-SP17-22	13.0	13.0	19.80	15*4		160	98		211	127	68	111
DOLY-SP17-23	13.0	13.0	21.12	16*4		167	99		221	133	68	112
DOLY-SP17-24	13.0	13.0	21.12	16*4		174	95		230	139	66	107
DOLY-SP17-25	15.0	15.0	22.44	17*4		181	101		240	145	69	113

Daily water requirement: 100~250 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP30-1	1.1	1.1	1.65	5*1	30	7.5	181	16~36	10	5.5	121	237
DOLY-SP30-2	2.2	2.2	3.30	5*2		15	181		20	10.5	121	248
DOLY-SP30-3	3.0	3.0	3.96	6*2		22	165		30	16	107	217
DOLY-SP30-4	4.0	4.0	5.28	16*1		29	175		40	21	113	232
DOLY-SP30-5	5.5	5.5	9.24	14*2		37	195		50	27	121	246
DOLY-SP30-6	5.5	5.5	9.90	15*2		44	165		60	32	107	217
DOLY-SP30-7	7.5	7.5	10.56	16*2		52	183		70	37	121	246
DOLY-SP30-8	7.5	7.5	11.22	17*2		59	169		80	43	111	222
DOLY-SP30-9	9.2	9.2	13.86	14*3		66	185		90	48	121	244
DOLY-SP30-10	9.2	9.2	13.86	14*3		74	165		100	53	109	221
DOLY-SP30-11	9.2	9.2	14.85	15*3		81	159		110	59	104	210
DOLY-SP30-12	11.0	11.0	15.84	16*3		88	162		120	64	106	214
DOLY-SP30-13	11.0	11.0	15.84	16*3		96	156		129	69	103	208
DOLY-SP30-14	13.0	13.0	19.80	15*4		103	158		139	74	104	211
DOLY-SP30-15	13.0	13.0	21.12	16*4		110	156		149	80	103	206
DOLY-SP30-16	15.0	15.0	22.44	17*4		118	161		159	85	106	214
DOLY-SP30-17	15.0	15.0	22.44	17*4		125	159		169	90	105	212
DOLY-SP30-18	18.5	18.5	26.40	16*5		132	180		179	96	118	237
DOLY-SP30-19	18.5	18.5	26.40	16*5		140	170		189	101	112	226
DOLY-SP30-20	18.5	18.5	28.05	17*5		147	169		199	106	111	225
DOLY-SP30-21	18.5	18.5	28.05	17*5		155	161		209	112	106	213
DOLY-SP30-22	22.0	22.0	31.68	16*6		162	176		219	117	116	234
DOLY-SP30-23	22.0	22.0	31.68	16*6		169	169		229	122	111	224
DOLY-SP30-24	22.0	22.0	33.66	17*6		177	169		239	128	111	224
DOLY-SP30-25	22.0	22.0	33.66	17*6		184	162		249	133	107	215

 Daily water requirement: 190~670 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP60-1	2.2	2.2	3.30	5*2	60	6	484	40~70	8.5	4	298	670
DOLY-SP60-2	4.0	4.0	5.28	16*1		12.5	433		19	9	249	556
DOLY-SP60-3	5.5	5.5	9.24	14*2		20	387		29	14	238	510
DOLY-SP60-4	7.5	7.5	10.56	16*2		29	350		40	21	221	446
DOLY-SP60-5	9.2	9.2	13.86	14*3		37	353		51	28	223	431
DOLY-SP60-6	11.0	11.0	15.84	16*3		45	339		62	34	214	414
DOLY-SP60-7	13.0	13.0	19.80	15*4		53	329		73	39	208	412
DOLY-SP60-8	15.0	15.0	22.44	17*4		61	333		84	45	211	417
DOLY-SP60-9	18.5	18.5	26.40	16*5		69	368		96	52	231	451
DOLY-SP60-10	18.5	18.5	28.05	17*5		77	345		106	58	219	423
DOLY-SP60-11	22.0	22.0	31.68	16*6		85	358		117	64	227	439
DOLY-SP60-12	22.0	22.0	31.68	16*6		93	328		127	70	209	402
DOLY-SP60-13	22.0	22.0	33.66	17*6		100	319		139	75	200	393
DOLY-SP60-14	25.0	25.0	33.96	16*7		106	319		149	80	198	391
DOLY-SP60-15	25.0	25.0	39.27	17*7		114	312		159	85	195	386
DOLY-SP60-16	30.0	30.0	42.24	16*8		122	339		170	91	212	419
DOLY-SP60-17	30.0	30.0	42.24	16*8		130	318		181	98	199	390
DOLY-SP60-18	30.0	30.0	44.88	17*8		140	311		194	105	196	383
DOLY-SP60-19	37.0	37.0	52.80	16*10		148	342		204	112	216	417
DOLY-SP60-20	37.0	37.0	52.80	16*10		155	326		214	118	206	395
DOLY-SP60-21	37.0	37.0	56.10	17*10		163	326		226	123	205	399

 Daily water requirement: 160~600 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP42-1	2.2	2.2	3.30	5*2	42	8.5	328	30~60	10.5	4	248	595
DOLY-SP42-2	3.0	3.0	3.96	6*2		17	219		21.5	8.5	162	374
DOLY-SP42-3	5.5	5.5	9.24	14*2		26.5	274		32.5	13	210	496
DOLY-SP42-4	7.5	7.5	10.56	16*2		36	271		43	18	212	463
DOLY-SP42-5	7.5	7.5	11.22	17*2		45	227		54	23	177	380
DOLY-SP42-6	9.2	9.2	13.86	14*3		54	233		66	28	178	383
DOLY-SP42-7	11.0	11.0	15.84	16*3		63	233		77	32	178	391
DOLY-SP42-8	13.0	13.0	19.80	15*4		72	233		87	36	180	397
DOLY-SP42-9	15.0	15.0	22.44	17*4		80	244		97	40	188	417
DOLY-SP42-10	15.0	15.0	22.44	17*4		89	230		108	45	177	388
DOLY-SP42-11	18.5	18.5	26.40	16*5		98	249		119	49	192	425
DOLY-SP42-12	18.5	18.5	28.05	17*5		107	239		130	54	184	404
DOLY-SP42-13	22.0	22.0	31.68	16*6		116	253		141	58	194	431
DOLY-SP42-14	22.0	22.0	31.68	16*6		125	234		152	63	180	397
DOLY-SP42-15	22.0	22.0	33.66	17*6		134	229		163	67	176	391
DOLY-SP42-16	25.0	25.0	36.96	16*7		143	228		174	72	175	386
DOLY-SP42-17	25.0	25.0	39.27	17*7		152	225		184	77	173	379
DOLY-SP42-18	30.0	30.0	42.24	16*8		161	247		195	81	190	419
DOLY-SP42-19	30.0	30.0	42.24	16*8		170	234		206	86	180	395
DOLY-SP42-20	30.0	30.0	44.88	17*8		179	234		217	90	180	397
DOLY-SP42-21	37.0	37.0	52.80	16*10		188	259		228	95	199	437
DOLY-SP42-22	37.0	37.0	56.10	17*10		197	260		238	99	201	441

 Daily water requirement: 280~570 m<sup>3</sup>

System Model	Pump kW	Inverter kW	Solar Panels kW	Array	Rated Flow m <sup>3</sup> /h	Rated Head m	Rated Daily Water Output m <sup>3</sup> /day	Daily Water Output Range				
								m <sup>3</sup> /h	m	m <sup>3</sup> /day		
DOLY-SP75-1	4.0	4.0	5.28	16*1	75	12	463	50~95	15.5	9	323	563
DOLY-SP75-2	7.5	7.5	10.56	16*2		25	417		32	19	293	500
DOLY-SP75-3	11.0	11.0	13.86	14*3		38	411		49	29	287	492
DOLY-SP75-4	15.0	15.0	22.44	17*4		52	401		66.5	40	282	475
DOLY-SP75-5	18.5	18.5	26.40	16*5		65	401		83	51	282	466
DOLY-SP75-6	22.0	22.0	31.68	16*6		79	396		100	62	281	460
DOLY-SP75-7	30.0	30.0	42.24	16*8		93	456		118	73	324	530
DOLY-SP75-8	30.0	30.0	44.88	17*8		107	417		135	85	298	479
DOLY-SP75-9	37.0	37.0	52.80	16*10		121	428		152	96	307	493
DOLY-SP75-10	37.0	37.0	56.10	17*10		135	404		169	107	291	465
DOLY-SP75-11	45.0	45.0	63.36	16*12		148	422		185	118	304	483
DOLY-SP75-12	45.0	45.0	67.32	17*12		162	407		202	129	294	467
DOLY-SP75-13	55.0	55.0	79.20	16*15		175	434		220	139	311	498
DOLY-SP75-14	55.0	55.0	84.15	17*15		188	404		238	149	287	465
DOLY-SP75-15	55.0	55.0	84.15	17*15		201	399		256	159	282	460
DOLY-SP75-16	63.0	63.0	89.76	16*17		215	395		274	169	279	458
DOLY-SP75-17	63.0	63.0	95.37	17*17		229	391		292	179	276	456
DOLY-SP75-18	75.0	75.0	105.60	16*20		243	427		309	190	302	498
DOLY-SP75-19	75.0	75.0	112.20	17*20		257	403		327	201	285	471
DOLY-SP75-20	75.0	75.0	112.20	17*20		271	403		345	212	285	470



## CT112 SERIES SOLAR PUMP INVERTER



CT112 series solar pump inverter applied in solar pumping system can convert DC power from solar PV array to AC power to run pump motors. Inverter controls the system operation and adjust the output frequency in real-time according to the variation of sunlight intensity to realize the maximum power point tracking (MPPT).

CT112 series solar pump inverter are widely used in agriculture irrigation, drinking water, desert control, saline land improvement, animal husbandry, fishery oxygenation, fountain, etc.

### CT112 Series Features

- Apply to all kinds of single phase or 3 phase AC induction motor.
- Equipped with TI DSP digital control technique and Infineon IGBT power integration module design.
- Maximum power point tracking (MPPT) algorithm for dynamic VI.MPPT efficiency can be 99%
- Fast response speed and good stability.
- AC and DC input available, but do not use DC and AC at the same time.
- Remote control, support RS485 protocol.
- Automatic sleep&awake function:
  - 1) auto sleep and awake according to the high and low water level in the tank respectively.
  - 2) auto sleep and awake according to the weak and strong sunlight respectively.
- Full protections: overload, over-current, over-voltage, under-voltage, short circuit, dry pumping.
- PV reversed connection protection.

### CT112 Series Technical Parameters

Model		CT112-2S0.4G~4.0G	CT112-2T-0.7G~5.5G	CT112-4T-0.7G~132G	
Input Specification	PV Input	Max. Input PV Voltage (PV Open-Circuit Voltage)	450VDC	450VDC	780VDC
		Recommended MPPT Voltage Range	320~370VDC(Vmp)	320~370VDC(Vmp)	540~630VDC(Vmp)
		Recommended Input Operation Voltage	388~450VDC (VOC)	388~450VDC (VOC)	670~780VDC (VOC)
	Grid or Backup Generator	Input Voltage	1PH220V (-15%~30%)	1PH & 3PH220V (-15%~30%)	3PH380VAC (-15%~30%)
Output Specification		Rated Output Voltage	1PH220V	1PH & 3PH220V	3PH380VAC
		Output Frequency	0~600.00Hz (Default: 0~60.00Hz)	0~600.00Hz (Default: 0~60.00Hz)	0~600.00Hz (Default: 0~60.00Hz)
Protection	Built-in Protection: Lighting Protection, over-current, over-voltage, output phase-lose, under-load, under-voltage, short circuit, overheating, water pump run dry etc.				
General Parameters	Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping or salinity etc.			
	Altitude	0~2000m, derated use above 1000m, per 100m, the rated output current decrease 1%.			
	Environment Temperature	-10°C~50°C (Environment Temperature be 40°C~50°C, please keep derated use.)			
	Humidity	5~95%, non-condensation			
	Vibration	Less than 5.9 m/s <sup>2</sup> (0.6g)			
	Storage Temperature	-20°C~+70°C			
	Efficiency	Rated Power Run ≥ 93%			
	Installation	Wall or rail mounting			
	Cooling	Forced Air Cooling			

## CT112 Series Rated Parameters

Model	Rated Power (KW)	DC Input VOC Voltage (V)	Recommend VOC Voltage (V)	Recommend MPPT Voltage (V)	Max. DC Input Current (A)	Rated Output Current (A)	Rated output Voltage (V)
CT112-2S-0.7G	0.75	300~450	388~450	320~370	8.5	5.5	1PH 220
CT112-2S-1.5G	1.5	300~450	388~450	320~370	14	10	1PH 220
CT112-2S-2.2G	2.2	300~450	388~450	320~370	23	13.8	1PH 220
CT112-2S-4.0G	4	300~450	388~450	320~370	35	20	1PH 220
CT112-2T-0.7G	0.75	200~450	388~450	320~370	8.5	4.5	3PH220
CT112-2T-1.5G	1.5	200~450	388~450	320~370	14	7	3PH220
CT112-2T-2.2G	2.2	200~450	388~450	320~370	23	10	3PH220
CT112-2T-4.0G	4	200~450	388~450	320~370	35	16	3PH220
CT112-2T-5.5G	5.5	200~450	388~450	320~370	50	20	3PH220
CT112-4T-0.7G	0.75	300~780	670~780	540~630	8.5	2.5	3PH380
CT112-4T-1.5G	1.5	300~780	670~780	540~630	8.5	3.7	3PH380
CT112-4T-2.2G	2.2	300~780	670~780	540~630	14	5.3	3PH380
CT112-4T-4.0G	4	300~780	670~780	540~630	23	9.5	3PH380
CT112-4T-5.5G	5.5	300~780	670~780	540~630	23	14	3PH380
CT112-4T-7.5G	7.5	300~780	670~780	540~630	35	18.5	3PH380
CT112-4T-11G	11	300~780	670~780	540~630	35	25	3PH380
CT112-4T-15G	15	300~780	670~780	540~630	50	32	3PH380
CT112-4T-18.5G	18.5	300~780	670~780	540~630	50	38	3PH380
CT112-4T-22G	22	300~780	670~780	540~630	75	45	3PH380
CT112-4T-30G	30	300~780	670~780	540~630	75	60	3PH380
CT112-4T-37G	37	300~780	670~780	540~630	100	75	3PH380
CT112-4T-45G	45	300~780	670~780	540~630	100	92	3PH380
CT112-4T-55G	55	300~780	670~780	540~630	150	115	3PH380
CT112-4T-75G	75	300~780	670~780	540~630	225	150	3PH380
CT112-4T-90G	90	300~780	670~780	540~630	300	180	3PH380
CT112-4T-110G	110	300~780	670~780	540~630	375	215	3PH380
CT112-4T-132G	132	300~780	670~780	540~630	450	260	3PH380

## CT112A SERIES SOLAR PUMP INVERTER



CT112A Series solar pump inverter with Booster type based on CT112 Series and equipped with auto-voltage boost function to satisfy operating demands of low voltage and simplify solar battery panel configuration, reducing system cost.

### CT112A Series Product Specification

Model	CT112A-2S-0.7	CT112A-2S-1.5	CT112A-2S-2.2	
DC INPUT	Max. DC current(V)	450		
	Starting voltage(V)	80	100	
	Min. Operation voltage(V)	60	80	
	Recommend MPPT voltage(V)	80~400	100~400	
	Input channel	One channel:MC4		
	Max. DC input current(A)	9	12	
Bypass AC input (model supports mains input)	Input voltage(Vac)	220/230/240(1PH)(-15%~+10%)		
	Input frequency(Hz)	47~63		
	AC input terminal	1P2L		
AC output	Rated(W)	750	1500	2200
	Rated current(A)	5.1(1PH)& 4.2(3PH)	10.2(1PH)& 7.5(3PH)	14(1PH)& 10(3PH)
	Output voltage(Vac)	0~input voltage		
	Output wiring mode	1P2L/2P3L/3P3L		
	Output frequency(Hz)	1~400		
Control performance	Control mode	V/F		
	Motor type	Asynchronous motor		
Other parameters	Dimension(L*W*H)(mm)	314*280*128		
	Protection level	IP54		
	Cooling mode	Natural cooling		
	HMI	External LED keypad		
Communication terminal	External communication	RS485/3 digital inputs		
Operation environment	Ambient temperature	-25°C~60°C(derate when the temperature is above 45°C)		
	Operation altitude	3000 m(derate when the altitude is above 2000m)		
	Warranty	18 months		

## ENGINEERING CASE

### 5.5KW Solar Pumping System in Morocco

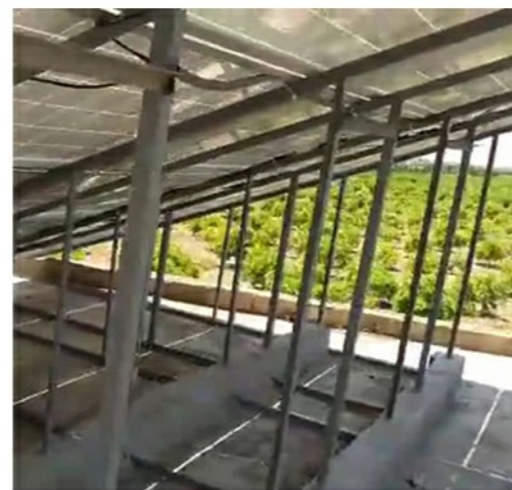
dolycon



Shenzhen Dolycon's 5.5kW solar pumping system was successfully installed in Morocco to provide domestic water for nearby residents. The system is powered by solar power generation, does not require energy storage batteries, and runs fully automatically. It not only ensures clean drinking water for local residents, but also improves household hygiene and health, and is highly praised by local residents.

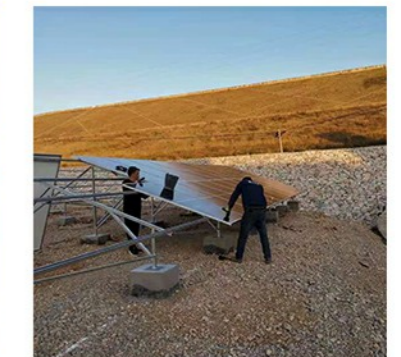
**Project Configuration:**

- 6KW solar panels
- 4KW water pump
- 5.5KW solar pump inverter



### 0.35MW PV+Grid Complementary System in Yunnan Province

dolycon



Shenzhen Dongli's 0.35MW PV+Grid Complementary System was successfully installed in a reservoir in Luliang County, Qujing City, Yunnan Province.

**Project Configuration:**

- 1280 275W polycrystalline components
- 4 sets of 75 kilowatt inverters
- 6 sets of 55-kilowatt water pumps, 4 used and 2 spare
- Mobile phone remote monitoring system
- Remote monitoring of water volume, power generation, etc.



# SOLAR PUMPING SYSTEM APPLICATION CASE



26KW Solar Water Saline Land Improvement in Ningxia



222KW Solar Pumping System in Sichuan Province



Solar Water Desert Control in Dubai



11KW Solar Irrigation in Saudi Arabia



Solar Pumped Hydropower Station in Kunming Dagan Wetland Park



5.5KW PV+Grid Complementary System in Guizhou Province



Solar Orchard Irrigation System in Yunnan Province



Solar Irrigation in Pakistan



Solar Irrigation in Guizhou Province



Solar Water Against Drought in Ningxia



Solar Oxygenation System in Kunming



Solar Central Pivot in Jiangsu Province