

LAMPIRAN

Lampiran 1. Flat Plate Collector

https://townway.en.made-in-china.com/product/EqnQBVLxRvYG/China-High-Efficiency-Flat-Plate-Solar-Collector-for-Sustainable-Energy-Solutions.html?acc=5494762105-lxy&cpn=21714728580-&tgt=&net=x&dev=c-&gid=Cj0KCQjwytS-BhCKARIsAMGJyzpT5u58MeXdxOFNq2iHOC7dDyocyl9zxFtfOYVcKRHyMufzP7aCf58aAizbEALw_wcB&kwd=&mtp=&loc=9124631-&gad_source=4&gclid=Cj0KCQjwytS-BhCKARIsAMGJyzpT5u58MeXdxOFNq2iHOC7dDyocyl9zxFtfOYVcKRHyMufzP7aCf58aAizbEALw_wcB

High-Efficiency Flat Plate Solar Collector for Sustainable Energy Solutions

US\$100.00-600.00
3 Pieces (MOQ)

Product Details

Customization:	Available
After-sales Service:	10 Years
Warranty:	5 Years

[Contact Supplier](#) [Chat](#)

Still deciding? Get samples of US\$ 150/Piece! [Request Sample](#)

Jiangsu Sunpower Solar Technology Co., Ltd.
Manufacturer/Factory & Trading Company

Diamond Member Since 2004

Audited Supplier

- Cooperated with Fortune 500
- Years of Export Experience

[Sign In](#) to see all verified strength labels (29)

[Add Inquiry Basket to Compare](#)

Lampiran 2. Tangki air panas


https://www.alibaba.com/product-detail/Stainless-steel-Solar-Heating-Canada-100l_62482000866.html?spm=a2700.details.you_may_like.4.957b7683u6YkGz

Home Appliances > Water Heaters > Solar Water Heaters

Stainless-steel Solar Heating Canada 100l Flat Plate Solar Collector Water Heater

No reviews yet

Guangzhou Sst Heating Energy Co., Ltd. - Verified Custom manufacturer - 6 yrs - CN



Customizable

1 - 9 units >= 10 units

Rp 3.172.282 **Rp 2.504.433**

Variations

Selected options: 1 pressure; 1 heating sy... [Edit selections](#)

pressure(1): Pressurized

heating system(1)

Shipping

Shipping fee and delivery date to be negotiated. Chat with supplier now for more details.

Lampiran 3. Pompa flow rate


<https://indonesian.alibaba.com/product-detail/TS5-5-PV-12-Volt-Water-2003502879.html>

Peralatan & Perkakas > Pompa & Suku Cadang > Pompa

TS5 Pompa Air 12 Volt 5 PV/Pompa Tenaga Surya DC/Pompa Sirkulasi Air Panas Tenaga Surya

(2 ulasan)

Changsha Tops Industrv & Technology Co., Ltd. - 15 yrs - CN



Dapat disesuaikan

Minimum pesanan: 100 meter 45 Buah

Rp 1.135.343

 Harga sampel: Rp 1.168.736

Variasi

Pilihan: 1 type; 1 maximum head; 1 Flow Rate [Edit pilihan](#)

type(1): Centrifugal Pumps

maximum head(1): 3.2m

Flow Rate(1)

Jasa pengiriman

Lampiran 4. Motorized valve

https://www.google.co.id/search?sca_esv=1635c2d40717c99f&dcr=0&sxsrf=AHTn8zp6S12yMtmCS0D4g3D5tAsFuhRT5w:1742065767343&q=2+way+motorized+valve&tbm=shop&source=lnms&fbs=ABzOT_CNxJtfLkrzMrsh_ZyJDEGUUhNfU1WD39pPoeOyVhTctVEBQ2s9tKn4iSaPapvmx4mllptfHEzMmKdIKzySPare-9dswmz1hHyKGeF6ZrhLo7HjHkCvyWfeMlaVCHFq5yAWPXCDi9GsLsuCy61VFEFPiRYN6As37Xhx1xQD8vsQjEGQswzGgSe2bYmPq8fCbdDKVsaTCNELJKfdnExmaLDUCabg&ved=1t:200715&ictx=111&biw=1600&bih=732&dpr=1.2#spd=332589461062571362



Motorized Valve Brass, G1/2" Dn15, 2 Way, Cr05, Electrical

Terjual 1 • ★ 5 (1 rating)

Rp484.000

[Detail](#)

Kondisi: Baru
Waktu Preorder: 20 Hari
Min. Pemesanan: 1 Buah
Etalase: [Semua Etalase](#)

Motorized Valve Brass, G1/2 #34; Dn15, 2 Way, Cr05, Electrical Kami Menyediakan Barang yang Anda Butuhkan - Item tersedia - Buka 24 jam, kec admin lagi ketiduran - Hub Kami Untuk Menanyakan varian Barang - Pengiriman cepat 6-15 hari sampai Port Size : G1/2 #34; Dn15 Media : Water Temperature Of Media : Medium Temperature Standard Or Nonstandard : Standard Model Number : Ms-Mv-2-15-12V-R05-1 Power : Solenoid Pressure : Medium Pressure Material : Brass Structure : Ball Brand Name : Misure This Listing Includes 1 Un...

[Lihat Selengkapnya](#)

Lampiran 5. Thermistor

<https://www.tokopedia.com/best-ay/ntc-thermistor-10k-1-3950-sensor-waterproof-high-temperature-air-probe-suhu>

Home > Pertukangan > Alat Ukur Industri > Pengukur Temperatur > NTC Thermistor 10K 1% 3950...




NTC Thermistor 10K 1% 3950 Sensor Waterproof High Temperature Air Probe Suhu

Terjual 30+ • ★ 5 (5 rating)

Rp5.899

Detail Spesifikasi Info Penting

Kondisi: **Baru**
 Min. Pemesanan: **1 Buah**
 Etalase: **Semua Etalase**

10K 1% 3950 NTC THERMISTOR PROBE TEMPERATURE SENSOR adalah sensor suhu thermistor tipe NTC (Negative Temperature Coefficient) dengan hambatan 10K ohm, dimana saat terjadi kenaikan suhu di probe mengakibatkan nilai resistansi semakin menurun.

Tipe probe ini umum digunakan di modul thermostat atau thermometer digital.
 Tipe ini juga kompatibel dan bisa digunakan sebagai replacement...

[Lihat Selengkapnya](#)

Lampiran 6. Pressure gauge

https://shopee.co.id/product/4320503/25469638?gads_t_sig=VTJGc2RHVmtYMTlxTFVSVVRrdENkv2xPckFNZUQ2bVJ1UDNBL1JuRHRkUXJuTUtXZUVdGJ2NThSalRWUS80WmptVGNZbnFCY1piZm91S05oZS84VvhRdGdmZmp6V1B1T1pjK3hKM09oU2RMZW16alErOThURmxrNXAxazN3MDM



Star+ PRESSURE GAUGE TEKIRO

4.7 ★★★★★ 26 Penilaian

Rp42.500

Pengiriman **Garansi tiba: 18 Maret** >
 Dapatkan Voucher s/d Rp10.000 jika pesanan tertambat.

Jaminan Shopee **Bebas Pengembalian · Proteksi Kerusakan +** >

Variation

2.5 bar

4 bar

6 bar

10 bar

16 bar

25 bar

Kuantitas - 1 +

Lampiran 7. Pipa air panas

<https://www.tokopedia.com/rekomendasi/7579514858>



Grasindo Indah Group
Kab. Tangerang

Pipa Air Panas 1/2inch / Pipa Water heater 1/2" / Selang Pipa Ripeng
★★★★★ (253)

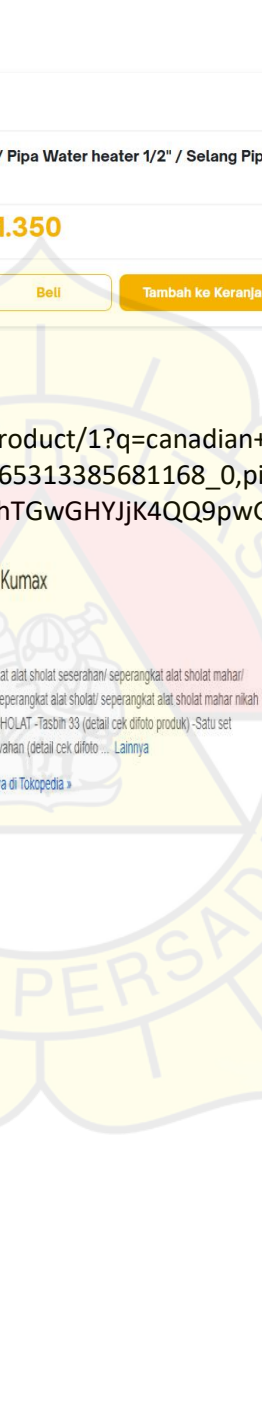
HARGA **Rp1.350**

177 Wishlist Bell **Tambah ke Keranjang**

Lampiran 8. Solar panel

https://www.google.com/shopping/product/1?q=canadian+solar+panel+cx6x&prds=epd:12011665313385681168,eto:12011665313385681168_0,pid:12011665313385681168&sa=X&ved=0ahUKEwjKsdrm4ouMAxVhTGwGHYJk4QQ9pwGCAo

Canadian Solar 550w 550 Watt Cs6w 550ms Mono Perc Module Kumax



Opsi pembelian Tentang hasil ini

Rp 2.625.000,00
Gratis ongkos kirim
Tokopedia

Buka situs

ADA STOCK seperangkat alat sholat seserahan/ seperangkat alat sholat mahar/ seserahan alat sholat/ seperangkat alat sholat/ seperangkat alat sholat mahar nikah ISI PAKET: SET ALAT SHOLAT -Tasbih 33 (detail cek difoto produk) -Satu set mukena atasan dan bawahan (detail cek difoto ... Lainnya

[Lihat detail selengkapnya di Tokopedia >](#)

Lihat semua foto

Lampiran 9. Battery

https://www.alibaba.com/product-detail/High-Capacity-Lifepo4-12v-100ah-200ah_1600936147996.html?s=p

High Capacity Lifepo4 12v 100ah 200ah 300ah 460ah Lithium Ion Battery Pack for Solar Power System

No reviews yet · 50 sold

Guangdong Zhongju Power Technology Co., Ltd. · Verified Custom manufacturer · 3 yrs · CN

25.6V 400Ah Battery System
Max Load Power 10240W

for various renewable energy applications

Other recommendations for your business

Customizable

Minimum order quantity: 2 pieces

Rp 2.087.028-5.493.056

Sample price: Rp 2.253.990

Variations

Total options: 1 Color ; 1 Nominal Voltage ; 3 N... [Select now](#)

Color(1): Blue

Nominal Voltage(1): 12.8V

Nominal Capacity(3)

100Ah 200Ah 300AH

Shipping

Shipping fee and delivery date to be negotiated. Chat with supplier now for more details.

Lampiran 10. Solar charger controller

https://shopee.co.id/product/1139912461/29203294114?gads_t_sig=VTJGc2RHVmtYM TlxTFVSVVrRdENkVHQ3ZkZSUTMrR3pBWmZZnzdrnRBMTlpN25ab0J1K1Ikbn2W19tRnF3YjBDWkNheVV4cFhEMUt0cW5KWwFsSjFIOGhPOU9VM0dDQWp4MG95bHlqNctSUIVy c0RYNVUwLzliWUdJbXhtVmV6QTRUMFJGTVPuMkVDR1o3M1NWcXd3PT0&gad_source=1&gclid=Cj0KCCQjwhr6_BhD4ARIsAH1YdjDC5yseX4tLhzx-UXNRCpO4PYeyLoQoS6OQLFcbKEoltQmdIBTWP6waApgXEALw_wcB

120A Charging Current

PowMr 6200W

Off-Grid MPPT Hybrid Inverter
PV Array Voltage Range: 60-500VDC

48V Battery Voltage

24 Months
Free Warranty

Can Used Be Of Any Type Battery

Start! PowMr 6.2KW Inverter Surya Hibrid Off-Grid 48V MPPT Pengendali Pengisi Daya Surya 500VDC Inverter Hibrid Mendukung Baterai Lifepo4

4.6 stars | 13 Penilaian

Rp4.800.000 ~~Rp7.179.502~~ -33%

Pengiriman
Dapatkan Voucher s/d Rp10.000 jika pesanan terlambat.

Jaminan Shopee

Kuantitas

Share: [Facebook](#) [Twitter](#) [Pinterest](#) [LinkedIn](#)

Lampiran 11. Bracket

https://www.tokopedia.com/isiya/bracket-solar-panel-jenis-pole-mounted-80-150-wp?aff_unique_id=&channel=others&chain_key=

BRACKET SOLAR PANEL JENIS POLE MOUNTED 80-150 WP
1 orang menyukai barang ini
Rp505.000

Detail
Kondisi: Baru
Min. Pemesanan: 1 Buah
Etalase: [Semua Etalase](#)
BRACKET SOLAR PANEL UNTUK PEMASANGAN DI TIANG BISA UNTUK UKURAN 80 - 150 WP

Atur jumlah dan catatan
- 1 + Stok Total: 100000
Subtotal: **Rp505.000**
[+ Keranjang](#)
[Beli](#)
[Chat](#) [Wishlist](#) [Share](#)

isiya storee
5.0 (1)
8 jam chat dibalas
[Follow](#)

Pengiriman
Dikirim dari **Jakarta Selatan**
Ongkir mulai **Rp80.000**
Reguler • Estimasi tiba besok - 20 Mar [Lihat Kurir Lainnya](#)

Beli di aplikasi, makin banyak promo!
Scan QR-nya untuk lihat barang ini di aplikasi Tokopedia. Bebas ongkir, lho- [Scan QR](#)

Ada masalah dengan produk ini? [Laporkan](#)

Lampiran 12. Heater

https://www.tokopedia.com/duniamarket8/original-elemen-pemanas-air-500w-element-water-heater-ariston-20cm-500?aff_unique_id=&channel=others&chain_key=

Home > Pertukangan > Ledeng > Water Heater > Original Elemen Pemanas Air 500w Element Wa...

Original Elemen Pemanas Air 500w Element Water Heater Ariston 20cm 500
Rp195.000

Detail
Kondisi: Baru
Min. Pemesanan: 1 Buah
Etalase: [Semua Etalase](#)
Selamat datang di duniamarket8 :) Wajib ada video unboxing jika mengajukan komplain. Terima kasih :)

duniamarket8
5.0 (5)
± 3 jam pesanan diproses
[Follow](#)

Lampiran 13. Kabel listrik

https://shopee.co.id/product/43229082/23326224964?gads_t_sig=VTJGc2RHVmtYMTlxTFVSVVRrdENkVzBLS2xuUGZzMIQ5NjlfWklmRkZjUjQzQkU4SEVmL2hWSml1c0NzeEsxdzA3MGtEVEVUMiYvVmhabFpkWXB6SWd0RnZXUWFmQTYxRndwODQ3b0tnTzRWcHI4S3NOMWxKTnliY0RYbGhWwMw&gad_source=1&gclid=Cj0KCQjwyt5-BhCKARIsAMGJyzoEubI3JdDilJ92CQY6MvRbde7YFUCFMAmkWw6fl-OQnxZpY9E1-ZUaApoHEALw_wcB

Start Kabel NYM 2 x 1,5mm 50 Yard FULL / Kabel Listrik Tembaga Murni PVC SNI / Mrek Hakamitsu

4.8 8,1RB Penilaian Laporkan

Rp219.999 ~~Rp332.388~~ -34%

Pengiriman Diperkirakan diterima: 18 sampai 21 Maret >
Dapatkan Voucher s/d Rp10.000 jika pesanan terlambat.

Jaminan Shopee Bebas Pengembalian · Proteksi Elektronik >

Kuantitas: - 1 +

Masukkan Keranjang Beli Sekarang

Share: Favorit (4,5RB)

Lampiran 14. Omron

<https://www.tokopedia.com/rekomendasi/13516766428>

TRISTAR TEKNIK
Jakarta Utara

PLC Omron CP1E-N20DR-A CP1E-N30DR-A CP1E-N40DR-A CP1E-N60DR-A CP1E-N20SDR-A CP1E-N30SDR-A CP1E-N40SDR-A CP1E-N60SDR-A CP1E-N20DT-A CP1E-N30DT-A CP1E-N40DT-A CP1E-...

HARGA **Rp2.400.000**

0 Wishlist Beli Tambah ke Keranjang

Lampiran 15. HMI Touch screen

https://shopee.co.id/product/298747939/12638354624?gads_t_sig=VTJGc2RHVmtYMTIxTFVSVVRrdENkVVp3RFo3Mkw5czd4Z0hzdEF1WVFibllNRU1QNCtNZVFPT0Y0ZmJ1V1EwUHBBwVjJkdFpRUW5YOGwxczhvRWVwYnJTOHVUM0tjNDk5ZkxGQXhYOC9lL3BsSThUVUJmcUFHNO1jYzRjbEFwVFo



Lampiran 16. Komparasi perhitungan

A. Perhitungan Biaya Tenaga Diesel				A. Perhitungan Biaya Sistem Solar Collector, Panel dan AC			
A.1 Modal Pembelian Alat (Diesel)				A.1 Modal Pembelian Alat (Diesel)			
Asumsi harga beli	Rp	180.950.000	per unit	Asumsi harga beli	Rp	227.102.974	per unit
Jumlah unit			1 unit	Jumlah unit			1 unit
Total modal	Rp	180.950.000	all unit	Total modal	Rp	227.102.974	all unit
A.2 Biaya Operasional (Diesel)				A.2 Biaya Operasional (Diesel)			
<i>Perhitungan kebutuhan fuel diesel per unit</i>							
Durasi pemanasan		12,00	jam/hari/unit				jam/hari/unit
Konsumsi fuel diesel		2,00	liter/jam/unit				liter/jam/unit
Konsumsi fuel diesel		24,00	liter/hari/unit				liter/hari/unit
<i>Perhitungan biaya fuel diesel</i>							
Jumlah unit		1,00	unit				unit
Konsumsi fuel disel		24,00	liter/hari/unit				liter/hari/unit
		24,00	liter/hari/all unit				liter/hari/all unit
Harga fuel diesel	Rp	21.200,00	Per liter				Per liter
Biaya fuel diesel	Rp	508.800,00	per hari				per hari
	Rp	15.264.000,00	per bulan				per bulan
	Rp	183.168.000,00	per tahun				per tahun
A.3. Biaya Maintenance (Diesel)				A.3. Biaya Maintenance (Diesel)			
<i>Biaya oil & lubrikasi</i>				<i>Biaya Perawatan Solar Collector dan Panel Surya</i>			
Kebutuhan oil & lubrikasi		6,00	liter/service	Pembersihan panel	12	100.000,00	perawatan/bulan
Frewkensi service		18,00	service/tahun/unit		Rp	1.200.000,00	perawatan/tahun
Jumlah oil & lubrikasi		108,00	liter/tahun unit				
		108,00	liter/tahun all unit				
Harga oil & lubrikasi	Rp	10.000,00	per liter				
Harga oil & lubrikasi	Rp	1.080.000,00	per tahun				
<i>Biaya spare part :</i>							
Biaya sparepart	Rp	420.000,00	/service				
	Rp	7.560.000,00	/service all unit				
<i>Biaya tenaga mekanik</i>							
Jumlah service		18,00	service/tahun all unit				
Biaya mekanik		100.000,00	per orang/service				
Jumlah mekanik		2,00	orang				
Biaya mekanik	Rp	3.600.000,00	/tahun all unit				
A. 4 Total Biaya 5 tahun (umur depreisasi)				A. 4 Total Biaya 5 tahun (umur depreisasi)			
Modal pembelian alat	Rp	180.950.000	sekali beli	Modal pembelian alat	Rp	227.102.974	sekali beli
Biaya operasional	Rp	549.504.000	per 3 tahun	Biaya operasional	Rp		per 3 tahun
Biaya maintenance	Rp	36.720.000	per 3 tahun	Biaya maintenance	Rp	3.600.000	per 3 tahun
Total Biaya Hybrid Pemanas Air	Rp	767.174.000	per 3 tahun	Total Biaya Hybrid Pemanas Air	Rp	230.702.974	per 3 tahun