FUTURE ENERGY

Your Sustainable Home Energy Catalogue

Specialists in sustainable energy solutions

future-energy.co.nz

A Better Future for all New Zealanders through Sustainable Energy Solutions.

Now more affordable than ever - over the past five years, the cost of installing a solar system has significantly reduced and now makes an easy investment decision.

With an overstretched low voltage grid and electricity demand expected to double by 2050, it's now easy to make the smart choice and take control of your Future.

Why go solar?

Energy Saving

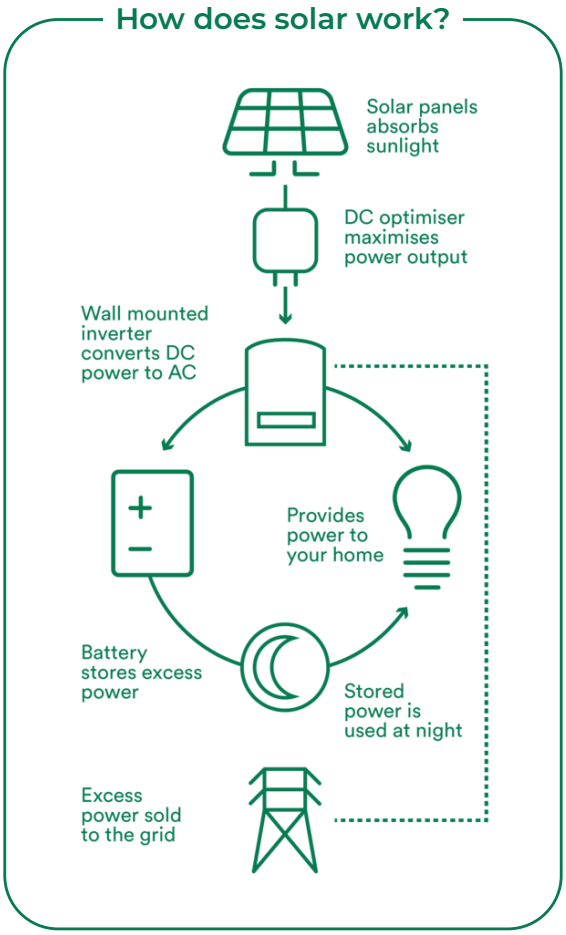
Installing solar panels harnesses the sun's energy generating your own electricity, at home – your very own power station! – rather than buying it from an electricity retailer. Furthermore, you can store and/or sell any surplus energy back to the grid.

Energy Independence & Reliability

With your own solar system, electricity is created on your roof! This reduces reliance on the electricity grid and electricity retailers giving you control over your energy needs.

Environmental Benefits

Electricity generated from solar panels reduces the need to generate electricity by burning fossil fuels like coal and gas which create carbon dioxide (CO^2). We all need to do what we can to help the planet.



Solar energy is a renewable or ‘green’ energy powered entirely by the sun.

But how do solar PV panels turn sunlight into electricity?

Step 1: Power Generation

Solar ‘PV Panels’ capture sunlight, causing electrons in the panel’s silicon cells to release energy that becomes direct current (DC) electricity. PV panels are generally fitted on the roof facing a northerly or westerly direction, and tilted at a particular angle to maximize the amount of sunlight that each panel receives.

Step 2: Power Conversion

An ‘Inverter’ converts the DC into alternating current (AC) electricity, making it useable for homes and businesses.

Step 3: Usage

Grid-connected solar systems consume electricity generated from Solar System first, at night when there is no sunlight the ‘Solar Inverter’ will switch to using electricity supplied from the grid.

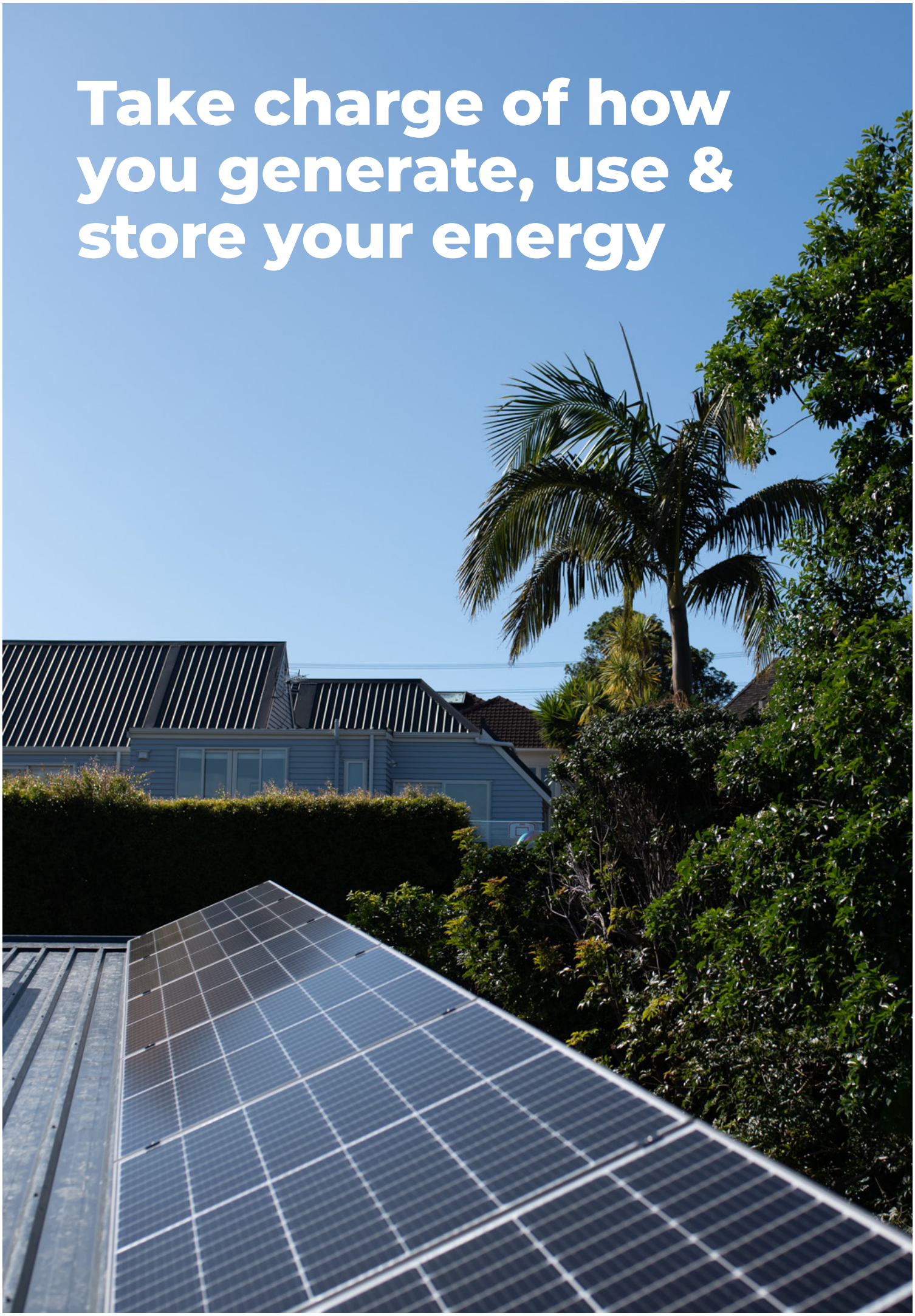
Step 4: Storage

If you have a Battery Solution, any excess electricity generated from your solar system during the day can be stored to use at night.

Step 5: Export

If no Batteries have been installed any excess electricity generated from your solar system can be sold back to the grid for a nominal credit.

Take charge of how you generate, use & store your energy



Solar system prices have reduced significantly since 2007 and now with a much shorter payback period, solar provides a fantastic return that in many cases is better than money earning interest in the bank. For this reason alone, many New Zealanders are now going solar.

Trina Solar Honey M
Monocrystalline Module

370W

The HONEY M series is perfect for small rooftop systems. HONEY M panels can generate high amounts of energy even when space is limited.

As one of the industry's most trusted panels, the HONEY M module is a popular option for residential and commercial customers because of its reliability, pleasing aesthetics and compatibility with all major balance of system components and module electronics.

120 CELL
MONOCRYSTALLINE MODULE

20.2%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

HALF-CELL DESIGN BRINGS HIGHER EFFICIENCY

- Low thermal coefficients for greater energy production at high operating temperature
- Half-cell layout = low cell connection power loss

IDEAL FOR LARGE SCALE INSTALLATIONS

- Reduce BOS cost with higher power bin

HIGHLY RELIABLE DUE TO STRINGENT QUALITY CONTROL

- Over 30 in-house tests (UV, TC, HF & many more)
- In-house testing goes well beyond certification requirements - 100% EL double inspection
- PID resistent

CERTIFIED TO WITHSTAND CHALLENGING ENVIRONMENTAL CONDITIONS

- 2400 Pa wind load
- 5400 Pa snow load
- 35mm hail stones at 97 km/h

COMPREHENSIVE PRODUCTS AND SYSTEM CERTIFICATES

ISO 9001, ISO14001, ISO14064, OHSAS18001 Certified. Conforms with IEC61215, IEC61730, UL1703, IEC61701, IEC62716

APPROVED PRODUCT

MODULE	370W

Electrical Characteristics STC

Max. Power (Pmax)	370W
Power Output Tolerance	0 ~ +5W
Module Efficiency	20.2%
Maximum Power Current (Imp)	10.82A
Maximum Power Voltage (Vmp)	34.2V
Short Circuit Current (Isc)	11.37A
Open Circuit Voltage (Voc)	41.3V

STC: Irradiance 1000 W/m2 , Cell Temperature 25ºC, Air Mass AM1.5.
*Measuring tolerance: ±3%.

Electrical Characteristics NMOT

	370W
Max. Power (Pmax)	280W
Maximum Power Current (Imp)	8.67A
Maximum Power Voltage (Vmp)	32.2V
Short Circuit Current (Isc)	9.15A
Open Circuit Voltage (Voc)	39.0V

NOCT: Irradiance at 800 W/m2, Ambient Temperature 20ºC, Wind Speed 1 m/s

Dimensions

	370W
Height (H)	1763mm
Width (W)	1040mm
Depth (D)	35mm

Max. Ratings

	370W
Operating Temperature	-40~+85ºC
Max. System Voltage	1000V DC (IEC) 1000V DC (UL)
Max. Series Fuse Rating	20A

Characteristics

	370W
Temperature Coefficient of VOC	-0.26%/ºC
Temperature Coefficient of Isc	0.04%/ºC
Temperature Coefficient of Pmax	-0.36%/ºC
Nominal Operating Cell Temp. (NMOT)	41ºC (±3ºC)

Mechanical Characteristics

	370W
Cell Type	120 cells (6 x 20) pcs in series
Glass	3.2mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Frame	35mm Anodized Aluminium Alloy
Junction Box	IP 68 rated
Output Cable	Photovoltaic Technology Cable 4.0mm Portrait: N 280mm/P 280mm, Landscape: N 1200mm /P 1200mm
Weight	20.0kg

Trina Solar Modules
Monocrystalline Honey Black M

320W, 325W, 330W, 335W, 340W

HoneyBlack M

With uniform, black monocrystalline multi busbar cells, the Honey Black M combines great aesthetics and efficiency with proven reliability and quality.

HoneyBlack M integrates various technologies like half-cut and multi busbar (MBB) cells, which can shorten over 50% of the current conduction distance and thus lower the internal ribbon resistance loss. Finer and narrower busbars mean that more sunlight can be reflected back to the round ribbon, thus increasing energy efficiency.

120 CELL
MONOCRYSTALLINE MODULE

19.4%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

OUTSTANDING VISUAL APPEARANCE

- Designed with aesthetics in mind
- Thinner wires that appear all black at a distance

HALF-CELL DESIGN BRINGS HIGHER EFFICIENCY

- Low cell connection power loss due to half-cell layout (120 monocrystalline)
- Low thermal coecients for greater energy production at high

HIGHLY RELIABLE DUE TO STRINGENT QUALITY CONTROL

- Over 30 in-house tests (UV, TC, HF & many more)
- In-house testing goes well beyond certification requirements
- 100% EL double inspection

CERTIFIED TO WITHSTAND CHALLENGING ENVIRONMENTAL CONDITIONS

- 2400 Pa wind load
- 5400 Pa snow load
- 2400/5400 is the measured load

COMPREHENSIVE PRODUCTS AND SYSTEM CERTIFICATES

ISO 9001, ISO 14001, ISO14064, OHSAS18001 Certified. Conforms with IEC61215, IEC61730, UL1703, IEC61701, IEC62716

APPROVED PRODUCT

MODULE	330W

Electrical Characteristics STC

Max. Power (Pmax)	330W
Power Tolerance	0 ~ +5W
Module Efficiency	19.4%
Maximum Power Current (Imp)	9.76A
Maximum Power Voltage (Vmp)	33.8V
Short Circuit Current (Isc)	10.39A
Open Circuit Voltage (Voc)	40.6V

STC: Irradiance 1000 W/m^2, Cell Temperature 25ºC, Air Mass AM1.5.
*Measuring tolerance: ±3%.

Electrical Characteristics NOCT

	330W
Max. Power (Pmax)	249W
Maximum Power Current (Imp)	7.90A
Maximum Power Voltage (Vmp)	31.5V
Short Circuit Current (Isc)	8.38A
Open Circuit Voltage (Voc)	38.2V

NOCT: Irradiance at 800 W/m^2, Ambient Temperature 20ºC, Wind Speed 1 m/s.

Dimensions

	330W
Height	1698mm
Width	1004mm
Depth	35mm

Max. Ratings

	330W
Operating Temperature	-40~+85ºC
Max. System Voltage	1000V DC (IEC) 1000V DC (UL)
Max. Series Fuse Rating	20A

Characteristics

	330W
Temperature Coefficient of VOC	-0.29%/ºC
Temperature Coefficient of Isc	0.05%/ºC
Temperature Coefficient of Pmax	-0.37%/ºC
Nominal Operating Cell Temp. (NOCT)	41ºC (±2ºC)

Mechanical Characteristics

	330W
Cell Type	120 cells (6 x 20) pcs in series
Glass	3.2mm (0.13 inches), High Transmission, AR Coated Tempered Glass
Frame	Silver Anodised Aluminium Alloy (DD05AII); Black (DD05A.08II, DD05A.05II)
Junction Box	IP 68 rated
Output Cable	Photovoltaic Technology Cable 4mm x 1000mm
Weight	18.7kg
Backsheet	White/Black

SMA Optimiser
TS4-R & TS4-R Duo Module Technology

Part Codes **SMATS4-R-M, SMATS4-R-S, SMATS4-R-O**

FEATURES

- Up to 192 W/m^2 power density
- Low thermal coefficients for greater energy production at high operating temperatures
- Selective deployment of DC optimizers as needed
- Easy installation on the ground reduces roof time
- Less components means reduced operation and maintenance costs
- Long service life due to demand-specific bypass operation
- 25 year warranty

The TS4-R module technology is a cost-effective system that fits into any PV module design, making it the right solution for every application. TS4-R ensures maximum energy yields and configuration flexibility; only fit the modules affected by partial shading or output loss. Tool free installation and selective deployment saves you time and risk whilst allowing for simple upgrades at any time. With TS4-R you can be sure of maximum energy yields, system reliability and miniumum maintenance costs.

Electrical Ratings	TS4-R-M	TS4-R-S	TS4-R-O
Nominal DC input power	375W	475W	475W
Absolute max. input voltage V_{in}	N/A	N/A	N/A
Max. PV module open-circuit voltage (VOC) at STC	52V	75V	75V
Max. current	12A	12A	12A
Min. V_{MPP}	16V	16V	16V

Output	TS4-R-M	TS4-R-S	TS4-R-O
Output power range	0W to 375W	0W to 475W	0W to 475W
Output voltage range	0V to V_{oc}	0V to V_{oc}	0V to V_{oc}
Communication	802.15.4, 2.4 GHz	802.15.4, 2.4 GHz	802.15.4, 2.4 GHz
Impedance matching capability	No	No	Yes
Output voltage limit	No	No	No
Maximum system voltage	1000V	1000V	1000V
Max. series fuse rating	15A	15A	15A

SMA Optimiser
TS4-R & TS4-R Duo Module Technology

Mechanical	TS4-R-M	TS4-R-S	TS4-R-O
Operating temperature range	-40°c to +75°c	-40°c to +75°c	-40°c to +75°c
Storage temperature range	-40°c to +75°c	-40°c to +75°c	-40°c to +75°c
Cooling method	Natural convection	Natural convection	Natural convection
Dimensions (with cover)	195.5mm x 158mm x 23mm		
Weight (with cover)	670g	670g	720g
Max. series fuse rating	IP65/IP67, NEMA 3R		

Cabling	TS4-R-M	TS4-R-S	TS4-R-O
Cabling type	PV1-F		
Output cable length	1.0m - other lengths available upon request		
Connector	MC4	MC4	MC4
UV resistance	500h with UVB light between 300 and 400mm at 65°c		
Max. string voltage	600V UL/1000V IEC	1000V UL/1000V IEC	
Outer cable diameter	6.25mm ± 0.25mm	7.15mm ± 0.25mm	
Conductor cross-section	4.0mm² (12 AWG)	4.0mm² (12 AWG)	4.0mm² (12 AWG)

Functions	TS4-R-M	TS4-R-S	TS4-R-O
Monitoring[1]	Yes	Yes	Yes
Shutdown[1]	-	Yes	Yes
Optimisation	-	-	Yes

[1]Cloud Connect Advanced and Gateway are required

SolaX Inverter
X1 Air

Part Codes **X1AIR2.5KW, X1AIR3.3KW**

The X1 Air series are a high quality dual MPPT inverter offering efficiency and reliability at an unbeatable cost.

SolaX have developed a range of single phase inverters unrivaled in the industry for their quality, reliability and efficiency. The SolaX single phase inverters boast a wide MMPT voltage range to allow for more energy harvesting and have a maximum input voltage of 600V, with maximum efficiency of 97.6%

AIR INVERTER	X1AIR2.5KW	X1AIR3.3KW
Input (DC)		
Max. recommended DC power	2700W	3450W
Max. input DC voltage	600V	
Max. input current	10A	
MPPT voltage range	100V-580V	
Start input/output voltage	65V/120V	
Number of MPP tracker/ strings per MPP tracker	1/1	
Output		
AC nominal power	2500W	3300W
Max. AC power	2500VA	3300VA
Nominal AC voltage; range	220V/230V/240V;180V-280V	
AC grid frequency; range	50Hz/60Hz; ±5Hz	
Max. AC current	12A	15A
Power factor (full load)	0.8 leading - 0.8 lagging	
Total harmonic distortion (THD)	< 1.5%	< 1.5%
Power Consumption		
Input Standby power	< 10W	< 10W
Efficiency		
MPPT Efficiency	99.9%	99.9%
Euro Efficiency	96.5%	96.5%
Max. Efficiency	97.6%	97.6%

SolaX Inverter
X1 Air

AIR INVERTER	X1AIR2.5KW & X1AIR3.3KW
Safety & Protection	
Over voltage protection	YES
Over current protection	YES
DC isolation impedance monitoring	YES
Ground fault current monitoring	YES
DC injection monitoring	YES
RCD protection	YES
Safety	EN62109-1/-2; G83/2; AS4777.2-2015; VDE4105; EN50438;CQC
EMC	EN6 l 000-6-2; EN6 l 000-6-3; EN6 l 000-3-2; EN6 l 000-3-3
Environment Limits	
Protection class	IP65
Operating temperature	-20°C~+60°C (derating at 45°C)
Humidity (%)	0~95%, no condensation
Altitude	2000m
Storage temperature	-20 °C~+6°C
Noise emission	< 30dB
Dimension & Weight	
Dimensions (W x H x D)	323 x 402 x 119mm
Weight	9.5kg
General Data	
Topology	Transformerless
Communication interface	RS 485/ WiFi/ DRM/ USB
LED display	11 LED
Warranty	5 years (10 years optional)
Cooling type	Natural

SolaX Inverter
X1 Boost

Part Codes **X1BOOST5KW**

The X1 Boost series are a high quality single MPPT inverter offering efficiency and reliability at an unbeatable cost.

SolaX have developed a range of single phase inverters, unrivaled in the industry for their quality, reliability and efficiency. The SolaX single phase inverters boast a wide MPPT voltage range to allow for more energy harvesting and have a maximum input voltage of 600V, with a maximum effeciency of 97.8%.

BOOST INVERTER	X1BOOST3KW	X1BOOST5KW
Input (DC)		
Max. recommended DC power	3250W	5200W
Max. DC voltage	600V	
Norminal DC operating voltage	360V	
Max. Input current	12A/12A	
Max. short circuit current	15A/15A	
MPPT voltage range	125V-580V	
MPPT voltage range (full load)	150V-550V	220V-550V
Start input voltage	100V	110V
Start output voltage	150V	
Shut down input voltage	70V	
No. of MPP trackers	2	
Strings per MPP tracker	1	
Output (AC)		
	X1BOOST3KW	X1BOOST5KW
AC nominal power	3000W	4999W
Max. AC power	3000VA	4999VA
Rated grid voltage (AC voltage range)	220V/230V/240V;180V-280V	
Rate grid frequency (AC range)	50Hz (45Hz to 55Hz)/60Hz (55Hz to 65hz)	
Max. output current (A)	14A	21A
Displacement power factor	0.8 overexcited to 0.8 underexcited	
Total harmonic distortion (THD)	< 2%	

SolaX Inverter
X1 Boost

BOOST INVERTER	X1BOOST3KW & X1BOOST5KW
Efficiency	
MPPT Efficiency	99.9%
Euro Efficiency	97.0%
Max. Efficiency	97.8%

Power Consumption	X1BOOST3KW & X1BOOST5KW
Input standby power	< 2W

Standard	X1BOOST3KW & X1BOOST5KW
Safety	IEC62109-1/-2 AS3100
EMC	EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/ EN 61000-6-2/EN 61000-6-3
Certification	VDE 0126-1-1 A1:2012/VDE-AR-N 4105/G83/G59/AS4777

Environment Limits	X1BOOST3KW & X1BOOST5KW
Protection class	IP65
Operating temperature	-20°C~+60°C (derating at +45°C)
Humidity (%)	0~95%, no condensation
Altitude	< 2000m
Storage temperature	-20°C~+60°C
Noise emission	< 25db
Mounting	Wall hanging

Others	X1BOOST3KW	X1BOOST5KW
Dimensions (W x H x D)	420 x 339 x 143mm	
Weight	14.6kg	16.7kg
Cooling Concept	Natural	
Topology	Transformerless	
Communication	Wifi, RF, Meter, RS485, USB, DRM	
LCD display	LCD	
Button	4 (CapSense Button)	
Warranty	5 years	

SolaX Inverter
X1 Single Phase Hybrid HV

Part Codes **X1-3000EHV, X1-5000EHV**

More than just an inverter, the innovative X-Hybrid is an intelligent energy management system that stores surplus energy in batteries for later use.

The X-Hybrid makes it possible to utilize solar power time-independently by storing unused capacity. It converts and directs solar power to where it is needed, when it is needed. X-Hybrid is also supplied EPS (Emergency Power Supply) function, allowing the end-user to user their stored energy in the event of a power outage.

SINGLE PHASE HYBRID HV INVERTER	X1-3000EHV	X1-5000EHV
Input (DC)		
Max. DC Input power	4000W	6000W
Max. DC Input voltage	600V	
Max. Input current (A)	10/10	
MPPT Voltage range	125-550V	
Min. DC Voltage/Start Voltage	360V	
No. of MPP trackers/ Strings per MPP tracker	2 / 1	
Output (AC)	**X1-3000EHV**	**X1-5000EHV**
AC Nominal Power	3000W	4999W
Max. AC Power	3000W	4999W
Nominal AC Voltage; Range	230 (180 to 270)	
AC Grid Frequency; Range	50/60Hz	
Max. AC Current	14.4A	21.7A
Power Factor (full load)	0.8 leading ... 0.8 lagging	
Total Harmonic Distortion (THD)	<2%	
Output DC (Battery)	**X1-3000EHV & X1-5000EHV**	
Battery voltage range	85-400V	
Recommended battery voltage	300V	
Max. charging/discharging power	6000W	
Max. charging/discharging power	20A	
Communication interfaces	CAN/RS485	
Reverse connect protection	Yes	

SolaX Inverter
X1 Single Phase Hybrid HV

SINGLE PHASE HYBRID HV INVERTER	X1-3000EHV	X1-5000EHV
EPS Output (with battery)		
EPS rated power	4000VA	5000VA
EPS rated voltage, frequency	230V, 50/60Hz	230V, 50/60Hz
EPS rated current	17.4A	21.7A
EPS peak power, duration	8000W, 10 seconds	
Switch time (s)	<0.5 seconds	
Total harmonic distortion (THD, linear load)	<2%	
Efficiency	**X1-3000EHV & X1-5000EHV**	
MPPT Efficiency	99.9%	
Euro Efficiency	97.0%	
Max. Efficiency	97.8%	
Euro Efficiency	98.5%	
Power Consumption		
Standby consumption (night)	<7W	
EMC	YES	
Standard	**X1-3000EHV & X1-5000EHV**	
Safety	IEC62109-1/-2 AS3100	
EMC	EN 61000-3-2/EN 61000-3-3/EN 61000-3-11/EN 61000-3-12/EN 61000-6-2/EN 61000-6-3	
Certification	VDE 0126-1-1 A1:2012/VDE-AR-N 4105/G83/G59/AS4777	
Environment Limits	**X1-3000EHV & X1-5000EHV**	
Protection class	IP65	
Operating temperature	-20°C~+60°C (derating at +45°C)	
Humidity (%)	0~95%, no condensation	
Altitude	<2000m	
Storage temperature	-20°C~+60°C	
Noise emission	<30dB	
Mounting	III (electric supply side), II (PV side)	
Others	**X1-3000EHV & X1-5000EHV**	
Dimensions (W x H x D)	482mm x 464mm x 182mm	
Weight	26.9kg	
Cooling Concept	Natural	
Topology	Transformerless	
Communication	Ethernet, Meter, WIFI (optional), RF (optional), DRM, USB, ISO alarm, Parallel operation	
LCD display	Backlight 20 x 4 character	
Warranty	5-10 years	

SolaX Inverter
AC Retrofit Hybrid

Part Codes **X1-FIT-3700E, X1-FIT-5000E**

FEATURES

- Integrated WiFi monitoring
- High charge/discharge rate
- Charge from the grid
- High performance lithium-ion batteries
- Use solar energy 24/7

The AC retrofit hybrid inverter can be installed on existing PV installations, on new systems that require charge from grid flexibility, but also in properties with no solar - enabling the end user to store cheap overnight electricity for use during high-tariff periods.

RETROFIT INVERTER	X1-FIT-3700E	X1-FIT-5000E
Input (AC)		
Nominal AC power	3680W	4999W
Max. AC current	16A	21.7A
Rated grid voltage [AV voltage range]	220V/230V/240V (180V to 270V)	
Rated grid frequency (Hz)	50/60Hz	
Displacement power factor	0.8 leading to 0.8 lagging	

Output (AC)	X1-FIT-3700E	X1-FIT-5000E
AC Nominal Power	3680W	4999W
Max. AC Power	6000W	10000W
Rated grid voltage [AV voltage range]	220V/230V/240V (180V to 270V)	
Rated grid frequency	50/60Hz	
Nominal AC Current	16A	21.7A
Displacement power factor	0.8 leading to 0.8 lagging	
Total Harmonic Distortion (THD)	<2%	

EPS Output (with battery)	X1-FIT-3700E	X1-FIT-5000E
EPS max power (VA)	5000	6000
EPS rated power (VA)	4000	4000
EPS rated current (A)	17.4	21.7
EPS max current (A)	21.7	26
EPS peak power (W)	8000, 10s	

SolaX Inverter
AC Retrofit Hybrid

RETROFIT INVERTER	X1-FIT-3700E & X1-FIT-5000E
Battery	
Battery voltage range	85V-400V
Recommended battery voltage	300V DC
Max. charge/discharge power	Up to 6000W
Max. charge/discharge power	20A (adjustable)
Peak charge/discharge power	30A, 30s

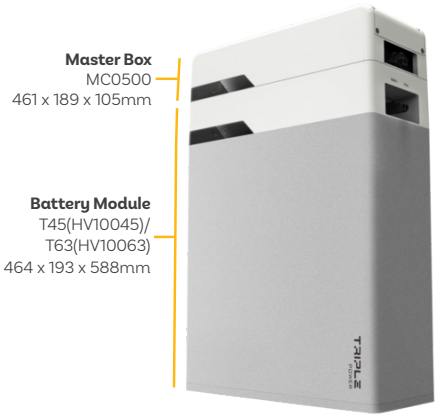
Environment Limit	X1-FIT-3700E & X1-FIT-5000E
Ingress protection	IP65
Operating temperature range	-20..... +60°C (derating at +45 °)C
Humidity	0~95 (non-condensing)
Over voltage category	III (electric supply side), II (battery side)

Dimension & Weight	X1-FIT-3700E & X1-FIT-5000E
Dimensions [WxHxD] (mm)	460*477*181.5
Weight	26.85kg
Communication	Ethernet, Meter, Wifi (optional), RF (optional), DRM, USB, ISO alarm
Standard warranty	5 years

Efficiency	X1-FIT-3700E	X1-FIT-5000E
Max. battery charge efficiency (AC t=o BAT) (@full load)	95.60%	95.60%
Max. battery discharge efficiency (BAT to AC) (@full load)	97.00%	97.00%

SolaX Energy Storage
Triple Power Battery

Part Codes **MC0500, T45, T63**



FEATURES

- Scalable up to 25.2kWh
- Up to 6kW charge/discharge
- Floor and wall mountable
- High voltage
- Compact Design
- Compatible with: X1 Hybrid, X1-Fit, X3-Hybrid and X3-Fit

SolaX Power is delighted to announce compatibility with the new Triple Power high-voltage battery solution. Designed and manufactured in partnership with SolaX, Triple Power will be offering 4.5 & 6.3kWh options, each of which can be installed in series with up to 3 more batteries of the same size. Boasting a 6000 cycle lifespan with a 5-year warranty and 90% depth of discharge, the new Triple Power battery is a flexible, practical, high-performance energy storage solution.

General Data

	MC0500	T45	T63
Nominal voltage (VDC)	N/A	100.8	100.8
Operating voltage (VDC):	70-500	85-118	85-118
Nominal capacity (kWh):	N/A	4.5	6.3
Max. charge/discharge current (A):	30	30	30
Recommend charge/discharge current (A):	25	25	25
Standard power (kW)	N/A	2.5	2.5
Maximum power (kW)	N/A	3	3
Dimension (W x D x H)	461mm x 189mm x 105mm	464mm x 193mm x 588mm	464mm x 193mm x 588mm
Weight (kg)	5.7	56.6	67.5
Faradic charge efficiency (25°C) (%)	99		
Battery roundtrip efficiency (C/3, 25°C) (%)	95		
Cycle life (90% DOD, 25°C)	6000		
Available temperature range (°C)	0-45		
Optimal operating temperature (°C)	12-30		
Ingress protection	IP55		
Scalability	Up to 4 modules (HV10045/10063)		
Warranty (years)	10		
Certificates	**T-Bat System Safety:** CE, FCC, RCM, TUV, (IEC 62619), UL 1973. **Battery Cell Safety:** UL1642. **UN Number:** UN3480. **Hazardous Materials Classification:** Class 9. **UN Transportation Testing Requirements:** UN38.3		

T-BAT SYS-HV Configuration List

System	4.5kWh	9.0kWh	13.5kWh	18.0kWh	6.3kWh	12.6kWh	18.9kWh	25.2kWh
Master box	1	1	1	1	1	1	1	1
Battery module	T45 x 1	T45 x 2	T45 x 3	T45 x 4	T63 x 1	T63 x 2	T63 x 3	T63 x 4
Voltage (V)	85-118	170-236	255-354	340-472	85-118	170-236	255-354	340-472

SolaX Accessories
X1 EPS Box

Part Code **SKEPSBOX**

EPS BOX	SKEPSBOX
Grid	
MAX. AC Input Current	63A
Rated AC Voltage	230V
Rated AC Frequency	50Hz/60Hz
Load	
Rated Load Output Current, Grid Mode	63A
Rated Load Output Current, EPS Mode	17A
Rated Grid Voltage	230V
Rated Grid Frequency	50Hz/60Hz
General Information	
Dimension (W x H x D)	300 x 220 x 170mm
Operating Temperature Range	-10°C~+50°C
Degree Of Protection	IP20
Warranty	1 Year

Neuton Power Mounting Systems
Pitched Roof Racking System

Neuton Power Pitched Roof designs have great flexibility for both commercial and residential roof solar systems. Suitable for installing framed and frameless modules flush to a pitched roof. Special extruded aluminium rail, pre-assembled clamps and varied roof hooks or brackets with tilt-in modules ensure easy and quick installation, saving on labour time and cost. The customised rail lengths do not require on-site cutting or welding - maximising the appearance, structural strength and anti-corrosive performance.

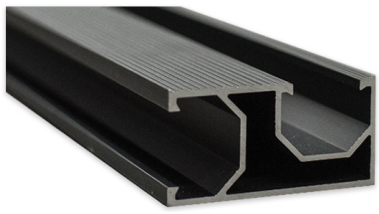
FEATURES

- **Easy Installation:** The tilt-in module can be put into the extruded rail from any section and can be pre-assembled with the clamp and roof hook, minimising time and cost of installation
- **Flexibility & Adjustable:** These systems accommodate most commercially available framed or frameless solar panels and diverse roof types
- **Safety & reliability:** The racking systems can stand up to the extreme weather and comply with AS/NZS 1170 load standards

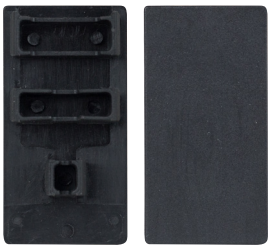
Technical Information

Install Site	Pitched roof
Tilt angle	Flush with roof up to 60°
Building height	Up to 20 metres
Max wind speed	Up to 60 metres/ second
Snow load	Up to 1.4 KN/m2
Material	High class aluminium alloy, stainless steel
Anti-corrosive life	Anodized
Product life expectancy	More than 20 years
Warranty	10 years

Rail Splice Kit Black
GSDRSPBLACK



4200mm PV Mounting Rail Black
GSDR4200BLACK



Black GD Rail Cap
GSADRGN

1

2

PRODUCT CODE	DESCRIPTION	NO.
Framed Module Clamps		
GSEC35BLACK	End clamp kit 35mm black	1
GSEC40BLACK	End clamp kit 40mm black	1
GSIC35BLACK	Inter clamp kit 35mm black	2
GSIC40BLACK	Inter clamp kit 40mm black	2

Neuton Power Mounting Systems
Pitched Roof Racking System

PRODUCT CODE	DESCRIPTION	NO.
Pitched Roof Racking		
GSDM25	GS tilt-in set for tile hook	1
GSIK01	Fixed tile bracket stainless steel	2
GSIK05	Aluminium tin interface kit	3
GSIK05BLACK	Aluminium tin interface kit black	4
GSIKH04	Hanger bolt hook	5
BRKTADJTILE	Solar adjustable tile bracket	6
BRKTFLASH	Solar flashfoot single bracket	7
SOLAREJOT10050	EJOT solarbolt for steel purlins	8

Neuton Power Mounting Systems
Tilt Racking System

Neuton Power Adjustable Tilt Solar Racking System is applicable to install the usual framed module to tilt a certain angle with the roof.

The solar system can be a fixed angle or adjustable such as 10~15 deg, 15~30 deg and 30~60 deg for your requirement. The special extruded aluminium rail, the tilt-in module, the clamp kit and the round leg can be pre-assembled and make the installation easy and quick to save your labour costs and time. The customised length can eliminate the need to weld and cut on site to keep the high anticorrosive performance, the structures strength and the appearance.

Technical Information

Install Site	Low profile roof or flat roof
Tilt angle	10 ~ 60°
Building height	Up to 20 metres
Max wind speed	Up to 60 metres/ second
Snow load	Up to 1.4 KN/m2
Standards	AS/NZS 1170 & other international standards
Material	High class aluminium alloy, stainless steel
Anti-corrosive	Anodized aluminium & stainless steel
Product expectancy	More than 20 years
Warranty	10 years

PRODUCT CODE	DESCRIPTION	NO.
GSADRLBLACK	Adjustable rear leg 10-15 degrees	1
GSADRL1530BLACK	Black adjustable front leg for tin roof	2
GSADRL3060BLACK	Black adjustable rear leg 15-30 degrees	3

About Future Energy

Future Energy is a New Zealand owned and operated specialist in sustainable energy solutions for residential homes and commercial enterprises.

We have sourced the best products from industry leading manufacturers and offer unbiased advice to determine the right solution to cater for your energy needs.

Our highly skilled team of energy experts are trained and dedicated to make a difference in peoples lives. We understand the need to protect and save our environment against climate change so we can create a better future for our future generations.

We care about the Future of our planet & our people.
We have a strong vision and values that will help create change and transition NZ towards sustainable energy.

This is the Future.

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We're proud members of:

Sustainable Energy Association New Zealand

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