Discover A Whole New Solar System

Introducing new solar powered gate operators

ECOSOL
Solar Gate Automation Solutions

With ECOSOL Technology the system is put to sleep when not in use, providing optimized use of stored battery power supplied by the sun. Proven BFT 24V gate operator systems offer reliable, efficient and attractive solutions that are economical and provide years of trouble free operation.

12" x 14" pre-wired Ecosol Libra enclosure with batteries

Ecosol easy to connect interface with batteries

ECOSOL Charger for rapid charging of batteries from standard electrical outlet

Phobos BT & BT L 24V DC operators for swing gates up to 16.5' & 550 lbs

Deimos BT 24V rack & pinion slider operator for gates up to 1,100 lbs

Igea BT 24V articulated arm for gates up to 550 lbs

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How does ECOSOL work?

When a BFT 24VDC Gate Automation Solution is connected to a solar panel, the most important factor beyond reliability is to consume the least amount of power both during the gate operation and in standby mode, while keeping the necessary safety devices and functions activated. BFT has managed to achieve both these goals with the development of the revolutionary ECOSOL board.

Revolutionary Technology - ECOSOL Board: The BFT Ecosol System has been designed with enhanced technology that puts the BFT Control Board to sleep when not in use for more than 5 minutes. This provides for an optimized system that allows for minimal power consumption from the batteries throughout the day. The result is an ultra efficient system that will provide optimized results even in geographical areas that are not in bright sunlight every day. The ECOSOL control board can be woken up by an impulse of a BFT Mitto remote control device, BFT T-Box radio digital keypad, BFT wall radio switch, wired keypad or a loop detector to open the gate.

BFT 24V DC Operators: BFT operators draw minimal power when activating a gate; for example, a Phobos BT 24VDC electromechanical linear arm, or an Igea BT 24VDC articulated arm for swinging gate applications consume a maximum of 40 watts for gates up to 550Lbs. A Deimos BT 24VDC for rack & pinion sliding only a maximum of 70 watts for gates up to 1,100 Lbs.

Solar Panel: New Phobos BT operators have been designed specifically for ECOSOL. Speed for opening 90 degrees with standard geometry and full batteries: ECOSOL Phobos BT: 14 seconds, ECOSOL Phobos BT L: 19 seconds, ECOSOL Igea BT: 15 seconds. A highly efficient small in size 10W, 24V solar panel is supplied by BFT to quickly charge the batteries. For higher traffic or low sun exposure, it is an option to add a set of larger capacity batteries and/or one or two extra solar panels. The panel can be wall mounted or post mounted (optional bracket necessary).

BFT USA is distributing two main options to connect a BFT automated gate to solar power.

1. An ECOSOL control box with a handle and rapid connectors, including 2-7.2Amp/h batteries (a second battery box can be added for increased capacity in low sun exposure areas)

2. An ECOSOL 12" x 14" pre-wired enclosure with Libra UL/CSA control panel, including 2-9Amp/h batteries (2 additional 9Amp/h batteries can be connected and added inside the enclosure for increased capacity in low sun exposure areas)

All BFT USA ECOSOL kits, slide or swing, single or dual operators come in only two boxes including necessary installation accessories. ECOSOL Phobos BT and BTL single and dual kits are packaged in easy to identify green boxes.

Number of Cycles*

ECOSOL has been designed for residential or low traffic applications.

- 10 cycles per day – 21 days without sun
- Up to 3 10W BFT ECOSOL solar panels can be connected to one ECOSOL board
- Choice of 2 or 4 x 7.2 Amp/h (standard on ECOSOL Interface box) or 2 or 4 9 Amp/h (standard on ECOSOL Libra UL/CSA enclosure) batteries for greater capacity
- 30+ cycles per day in optimum conditions

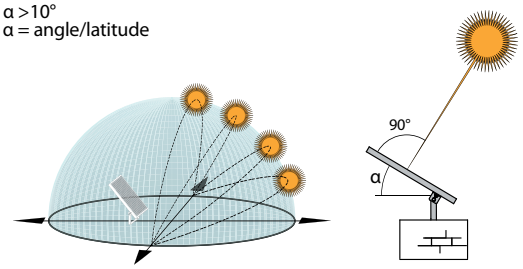
* Note: Based on one Single Phobos BT operator with FL 130B Photocells. Conditions may vary from installation to installation and alternative results may occur dependent on environmental conditions and geographical position.

ECOSOL Batteries Capacity Chart - Number of Cycles

	Deimos BT	Ares 1500	1 Phobos / Igea BT	2 Phobos / Igea BT	Moovi BT
Watts	70	400	40	80	300
Based on dimensions	1,100Lbs - 20Ft		550Lbs - 16.5Ft	550Lbs - 16.5Ft	16.5Ft
Opening angle			90 degrees	90 degrees	90 degrees
NUMBER OF CONTINUOUS CYCLES ON FULLY CHARGED					
Ecosol Box 2 x 7.2 Amp/h	100	35	560	280	800
Ecosol Box + Ecosol Double 4 x 7.2 Amp/h	200	70	1120	560	1000
Ecosol Box 2 x 9 Amp/h *	120	42	670	330	960
Ecosol Box + Ecosol Double 4 x 9 Amp/h *	240	84	1340	660	1920
Ecosol Libra Enclosure 2 x 9 Amp/h			670	330	

* ECOSOL boxes are supplied with 7.2 Amp/h batteries. 9 Amp/h batteries can be purchased to increase capacity.

α >10°
α = angle/latitude



Cities	
Seattle (WA)	47°
New York (NY)	41°
San Francisco (CA)	38°
Atlanta (GA)	34°
Los Angeles (CA)	34°
Phoenix (AZ)	33°
Dallas (TX)	33°
Houston (TX)	30°
Miami (FL)	26°
San Juan (PR)	18°

TECHNICAL

	ECOSOL® PANEL
Voltage	24 Volts
Power	10 Watts
Operating temperature	-4 ° F + 122 ° F
Dimensions	11.4"W x 14"H x 1.2"D
Weight	4.4 Lbs

	ECOSOL® BOX	ECOSOL® LIBRA UL/CSA
Voltage	24 Volts	
Peak Current	10 Amperes	
Nom. Battery Capacity	7.2 Amp/Hour	9 Amp/Hour
Degree o-f Protection	IP55	IP66
Operating Temperature	-4 ° F + 122 ° F	
Battery	2 x 12V 7.2 Amp/Hour batteries	2 x 12V 9 Amp/Hour batteries
Weight	14 Lbs	22 Lbs
Dimensions	8.6"W x 12.5"H x 4.7"D	13.25"W x 15.5"H x 7"D
Panel Maximum Power	35 Watts	
Standby Mode	0.15 Watts	
Number of Combinations	4 billion	
Number of Transmitters	63	
Boards	Ecosol	Ecosol + Libra UL/CSA
Application	All BFT 24V operators	Phobos BT, Igea BT

COMPONENTS:

KELIBRC003U ECOSOL Libra UL/CSA pre-wired enclosure:

12" x 14" pre-wired enclosure, including 2 x 9 Amp/h batteries (option to add 2 more batteries), Libra UL/CSA control board for Phobos BT and Igea BT, ECOSOL Interface board, allocation for low power consumption loop detectors.

N999471 ECOSOL Solar Panel:

11.4" x 14" highly efficient 24V, 10W solar panel with wall mounting bracket – Up to 3 panels can be connected to an ECOSOL Interface for optimum efficiency of the installation in low sun exposure areas.

D113731 ECOSOL Interface Box:

9" x 12.5" box with handle, including 2 x 7.2 Amp/h batteries, ECOSOL interface board and 3 rapid connecting outlets. To be connected to any BFT 24V BT control board. Control board and/or solar panel is connected to the ECOSOL Interface Box.

D113732 ECOSOL Double:

9" x 12.5" box with handle, including 2 x 7.2 Amp/h batteries, and 3 rapid connecting outlets. To be connected to D113731 ECOSOL Interface Box. Solar Panel is connected to ECOSOL Double.

N999473 ECOSOL Post Bracket:

Stainless steel adjustable bracket for post diameter 2" to 4".

D111750 Mitto 2 Transmitter:

Two channel 433Mhz rolling code remote control to wake-up ECOSOL board.

P121019 T-BOX Radio Keypad:

Backlit digital 433Mhz radio keypad with 10 channels and 100 combinations to wake up ECOSOL board.

N999475 ECOSOL Security:

Set of anti-theft bolts for ECOSOL solar panel.

N999477 ECOSOL Charger:

Battery charger 100/230V – 24V for rapid charging of ECOSOL Interface Box and ECOSOL Double from a standard electrical output.

N999476 ECOSOL Cable:

65 feet cable with connectors for ECOSOL charger.

KCAB2BR ECOSOL Solar Panel Cable:

2 core red & black cable – 15 feet included in ECOSOL kits.

KLOOPDLPSR Loop Detector LPSR:

Low consumption loop detector for ECOSOL - allocation for 2 in enclosure. If shadow loop is connected, a relay KRELAY24V must be added.

KEXITPROBE: DML-8LP Probe Kit

Exit probe with low power consumption detector - 80' wire included

KRELAY24V 24V Relay:

Relay to connect loop detector onto Libra board for shadow loop.

KBAT12V9AH 9 Amp/h 12 V Battery:

Batteries for ECOSOL Libra UL/CSA pre-wired enclosures and replacement for ECOSOL Interface Box and ECOSOL Double.

Kits

BFT ECOSOL KITS, either single or dual ship in only two (2) boxes:

1: includes the ECOSOL solar panel with 15 feet of cable, and the control board with batteries

2: includes one or two operators and installation accessories including 3 wire motor cables (8 feet on all Single Kits; 28 feet on Dual Phobos BT Kits and Igea BT kits; 38 feet on Dual Phobos BT L kits)

The following ECOSOL kits are currently available:

			Box 1 (Control)		Box 2 (Operators)	
Reference	Description	Content of Kit	Dimensions (Inches)		Dimensions (Inches)	Weight (Lbs)
KED113731	ECOSOL kit	ECOSOL control box + ECOSOL solar panel & 15' cable	18 x 14 x 10	23	N/A	N/A
KERCR92522803	ECOSOL Deimos kit	Deimos BT kit + ECOSOL kit	18 x 14 x 10	23	16 x 10 x 12.5	22
KELIBRC005U	ECOSOL Libra UL/CSA kit	Libra UL/CSA ECOSOL 12"x14" enclosure + ECOSOL solar panel & 15' cable	18 x 14 x 10	30	N/A	N/A
KERCR93534602F	ECOSOL Phobos BT kit single	Phobos BT kit single + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	47 x 15 x 5.5	18
KESCR93524603F	ECOSOL Phobos BT kit dual	Phobos BT kit dual + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	47 x 15 x 5.5	32
KERCR93534501F	ECOSOL Phobos BT L kit single	Phobos BT L kit single + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	47 x 15 x 5.5	20
KESCR93534502F	ECOSOL Phobos BT L kit dual	Phobos BT L kit Dual + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	47 x 15 x 5.5	35
KERCR93522903	ECOSOL Igea BT kit single	Igea BT kit single + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	32 x 11 x 13	39
KESCR93522904	ECOSOL Igea BT kit dual	Igea BT kit dual + ECOSOL Libra UL/CSA kit	18 x 14 x 10	30	32 x 11 x 13	59

Tax Certificate

BFT Ecosol gate automation solutions qualify for the 30% Residential Energy Efficient Property Federal Tax Credit.

Section 25D of the Internal Revenue Code provides a 30% credit to individuals for "qualified solar electric property expenditures" made by the taxpayer during taxable years beginning after December 31st, 2008 and until further notice as per government announcement. BFT solar gate operators and their related accessories (including ECOSOL box, batteries, solar panels and material used to connect the ECOSOL system) are considered "Qualified Solar Electric Property" by the IRS Code Section 25D under the definition provided in notice 2009-41 and as such qualifies for the Residential Energy Efficient Tax Credit. The taxpayer needs to complete Federal form 5695 and attach it to his/her personal tax return in order to claim this credit.

ECOSOL

Manufacturer's Certification for credit for residential energy efficient property
(Per Internal Revenue Service Code Section 25D)

Name & Address of manufacturer:
BFT U.S., Inc.
6100 Broken Sound Parkway, N.W.
Suite 14
Boca Raton, FL 33487

Identification of Property:
Solar Electric Property

CERTIFICATION

BFT U.S., Inc., as the manufacturer of BFT ECOSOL kits, certifies the following items qualify as solar electric property costs for the purpose of claiming the Residential Energy Efficient Credit authorized by the Internal Revenue Service Code Section 25D(*).

Make & model number of qualified property:

BFT DEIMOS BT ECOSOL KIT – Slide Rack & Pinion Deimos operator with ECOSOL Interface & panel
BFT PHOBOS BT ECOSOL Single Kit – Swing Phobos BT Single Kit with ECOSOL Interface & panel
BFT PHOBOS BT ECOSOL Dual Kit – Swing Phobos BT Dual Kit with ECOSOL Interface & panel
BFT PHOBOS BT L ECOSOL Single Kit – Swing Phobos BT L Single Kit with ECOSOL Interface & panel
BFT PHOBOS BT L ECOSOL Dual Kit – Swing Phobos BT L Dual Kit with ECOSOL Interface & panel
BFT IGEA BT ECOSOL Single Kit– Swing Igea BT Single Kit with ECOSOL Interface & panel
BFT IGEA BT ECOSOL DUAL Kit– Swing Igea BT Dual Kit with ECOSOL Interface & panel

Under penalties of perjury, I declare that I have examined this certification statement, and to the best of my knowledge and belief, the facts are true, correct, and complete.

Franck Seguin
President

(*) It is the responsibility of the tax payer to ensure that costs claimed towards the Residential Energy Efficiency Credit are in line with the IRS Service Code Section 25D and that this government sponsored initiative is current at the time of claiming credit.