

Table 2 List of Parts Included in **UIPV43000** Integrated Installation Package

Item	Qty	Description
1	224	Evergreen Solar ES-190-RL Modules (190W each, Option 1)
1alt	240	Evergreen Solar ES-180-RL Modules (180W each, Option 2)
2	10	Package UV resistant wire ties
3	224*	Lay-In Ground Lugs with SS set screws and mounting hardware (*240 for option 2)
4	1	Module Mounting Rail Set (Optional)
5	3	6x6x4-inch PVC W/P Junction Box
6	3	11-section UL-listed terminal strips for JBs
7	15	Module lead cord connectors (1/2" KO, 2-hole)
8	3	Ground wire cord connectors (1/2" KO, 1-hole)
9	1	Xantrex or equivalent source circuit combiner box with minimum of 15 15A inputs and minimum of 190A output
10	15	15A 600V fuses for source circuit combiner box
11	1	DC Surge Arrestor (600 V)
12	1	200 A, 600 V DC load break disconnect
13	1	Xantrex PV-45208 45 kW 3-phase 208 volt inverter
14	1	Xantrex 45 kVA isolation transformer
15	1	200 A, 600 V DC load break disconnect fused at 175 A
16	1	200 A, 600 V, 3-pole AC load break disconnect fused at 200 A
17	1	200 A, 600 V, 3-pole AC visible, lockable, load break disconnect fused at 200 A (NEMA-3R if required)

All other parts for the system, such as THWN-2 wire, PVC conduit, conduit fittings, straps and mounting screws are standard AC electrical components that are readily available from your favorite electric parts supplier.

Manufacturers’ Documents Included in this System Manual

- ES180-RL and ES190-RL Module Data Sheets (Spruce Datasheets)
- Spruce O & M Manual
- Spruce Product Bulletin
- Array Mount Data Sheets (if commercial array mount option is chosen)
- Xantrex or equivalent 600 V Source Circuit Combiner Box Data Sheets
- PV-45208 Inverter Specifications
- PV-45208 Operation and Maintenance Manual
- 45 kVA Isolation Transformer Installation Diagram (in PV-45208 O&M Manual)