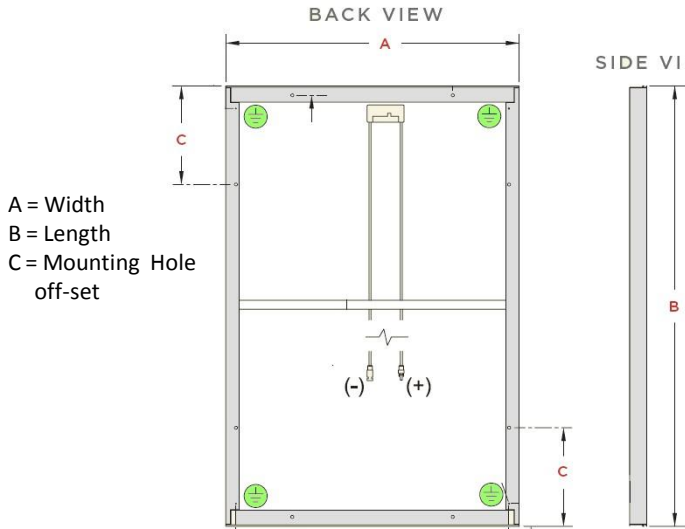
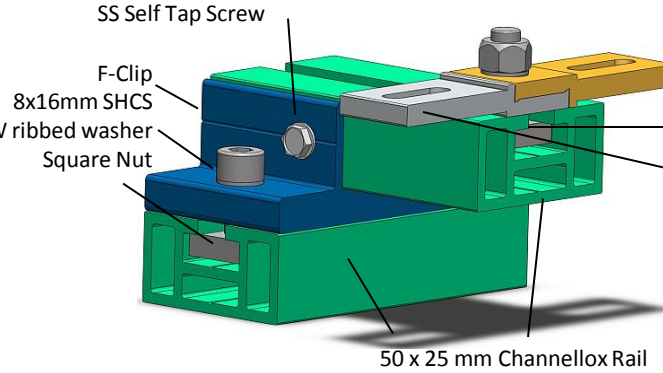


FOR ORDERING CHANNELLOX SYSTEMS
Choose From Standard Rails and Component Packs Below

Typical Panel Measurements Needed
Length, Width and Hole Spacing

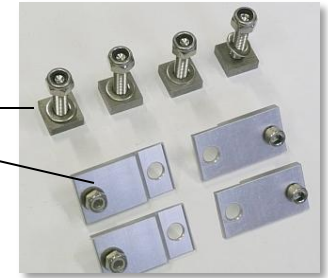


Assembled configuration



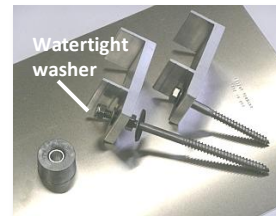
Copyright © 2010 True North Power NG Inc

Panel Packs



"First Row" Panel Packs contain 4 of everything above. **"Add a Row" Panel Packs** contains 2 T-Bolts instead of 4

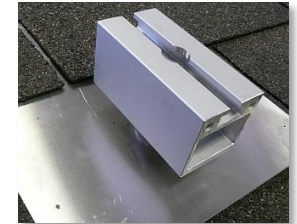
Roof Penetrator F-Clip Pack



Penetrator Pack 1
1 F-Clip 3 SS Screws and bolt only

Penetrator Pack 2
1 F-Clip, 3 SS Screws
1 Quick Mount PV Flashing with 6 inch Lag-bolt

25 or 50x 100mm with 4 – 6" lag-bolt



3 Standard Rail Sizes and 3 Standard Lengths

Order custom lengths if required (cut charge)
See load specifications for selecting rail size (next page)

2438mm

4880mm

6100mm

Rail Intersection F-Clip Pack



1 F-Clip
1 8x16mm SHCS
1 Ribbed washer
1 Square Nut
3 SS Self-Tap screws
1 spare screw for ground wire

Tilt Rail Pack

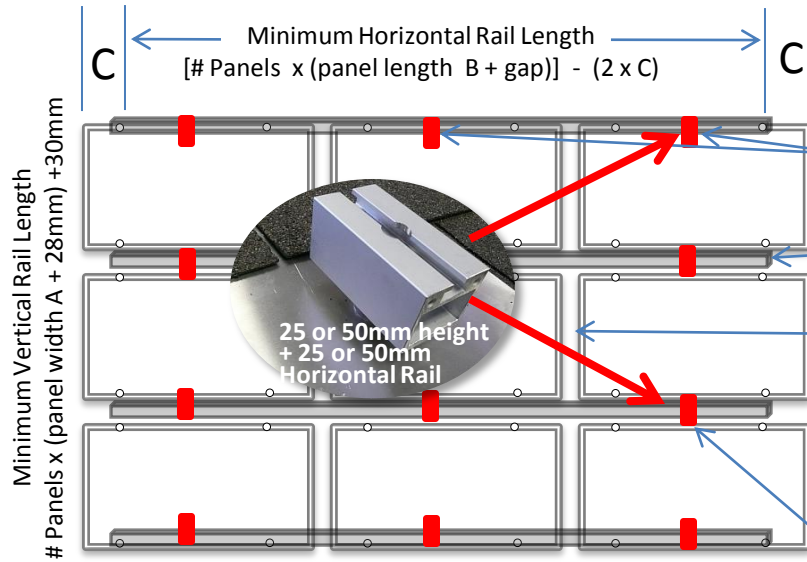


3 Stainless Pivot-Clips with 2 bolts ribbed washers & nuts
1 50x50mm Tilt Rail
1 50x50mm Support Rail (lengths cut to order)

Choosing Rail Size, Lengths and Quantities

NOTE: Check your panel specification sheet for exact measurements – Choose a rail length longer than the minimum calculations shown

Landscape ← (Landscape can use fewer components – Costs Less)



C = Panel Mounting Hole offset

Penetrator Spacing 24-32-48" depending on roofing

Panel Clip Gap 28mm (Fixed)

Panel to Panel Gap Min ~6mm (Variable)

Penetrator* & F-Clip w Stand-off Flatjack or QuickMount
*Need not be installed or aligned precisely

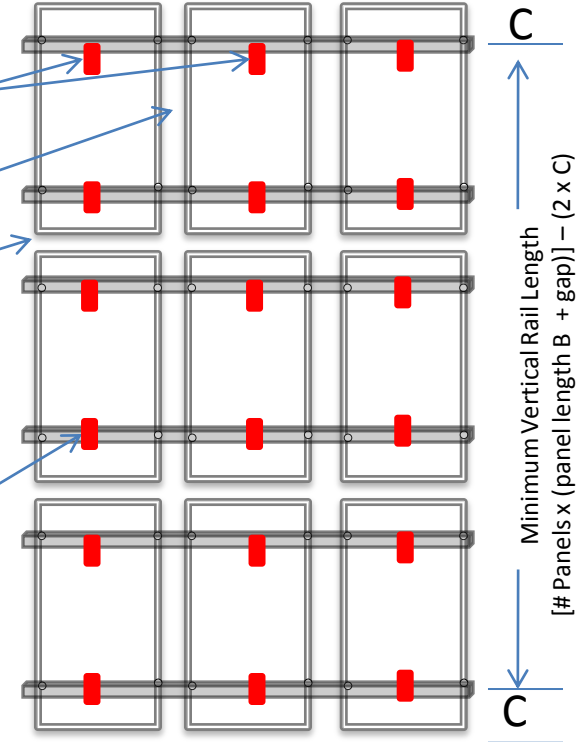
*Can be purchased with or without penetrator bolt and flashing

NOTE: Mounts can be done with more or fewer rails and penetrators. Consult a qualified structural engineer

Portrait

Minimum Horizontal Rail Length

$[\# \text{ Panels} \times (\text{panel width A} + 28\text{mm gap})] + 30\text{mm}$



Qty of Horizontal Rails = 2 for first row + 1 for each additional row
Qty of F-Clip Standoff/penetrator = 1 per panel / per horizontal row (depending on roof truss load and spacing - consult a qualified structural engineer)
Choose Channellox with Flatjack™, Quickmount™, Clicksys™ or other std penetrator
Qty of 1st Row Panel Clip Packs = 1 for each panel in the first row
Qty of Add-a-Row Panel Clip Packs = 1 for each remaining panel in the array
Flatjack™, Quickmount™, Clicksys™ are trademarks of their respective companies

Qty of Horizontal Rails = 2 needed per row of panels
Qty of Channellox Penetrator and F-Clip Packs = 2 per panel
Choose Channellox with Flatjack™, Quickmount™, or any std flashing
Qty of 1st Row Panel Clip Packs = 1 for each panel in the first row
Qty of Add-a-Row Panel Clip Packs = 1 for each remaining panel in the array
Flatjack™, Quickmount™, Clicksys™ are trademarks of their respective companies

Component Packaging

First Row Panel Pack - 4 Panel-Clips & M6 bolts with flat washer & nylock nut + 4 M8 25mm T-bolts, flat washer & nylock nut
Add-a-Row Panel Pack - 4 Panel-Clips & M6 bolts with flat washer & nylock nut + 2 M8 25mm T-bolts, flat washer & nylock nut

F-Clip Penetrator Pack 1 – 1 F-Clip + 3 Self-Tapping screws (Lag-bolt - Customer specified or supplied) (extras for grounding)

F-Clip & 1 Quick Mount or Flatjack Penetrator with 6 in lag bolt + 3 Self-Tap SS screws

100mm Channellox Stand-off – used alone on steel roof or with any std penetrator on asphalt roof

Pivot Clip Pack – 3 Stainless Pivot Clips, 6 M8 SHCC, with ribbed washer & square nut, 3 M10 Bolt, flat washer & nylock nut

	50x25mm	50x50mm	50x75mm
2438mm 8ft Rail	x	x	x
4880mm 16ft Rail	x	x	x
6100mm 20ft Rail	x	x	x
Custom Length Angled Tilt Rail		x - Cut Charge	
Custom Length Support Tilt Rail		x - Cut Charge	

Rail Loading Specification (6063-T6 Al Anodized) (Test Dec09)

Profile Weight capacity per 1 meter span
50x 25mm = min. 220kg 488lbs ->430kg 955lbs to deformation
50x 50mm = min. 300kg 667lbs ->617kg 1372lbs to deformation
50x 75mm = min. 440kg 978lbs ->882kg 1960lbs to deformation

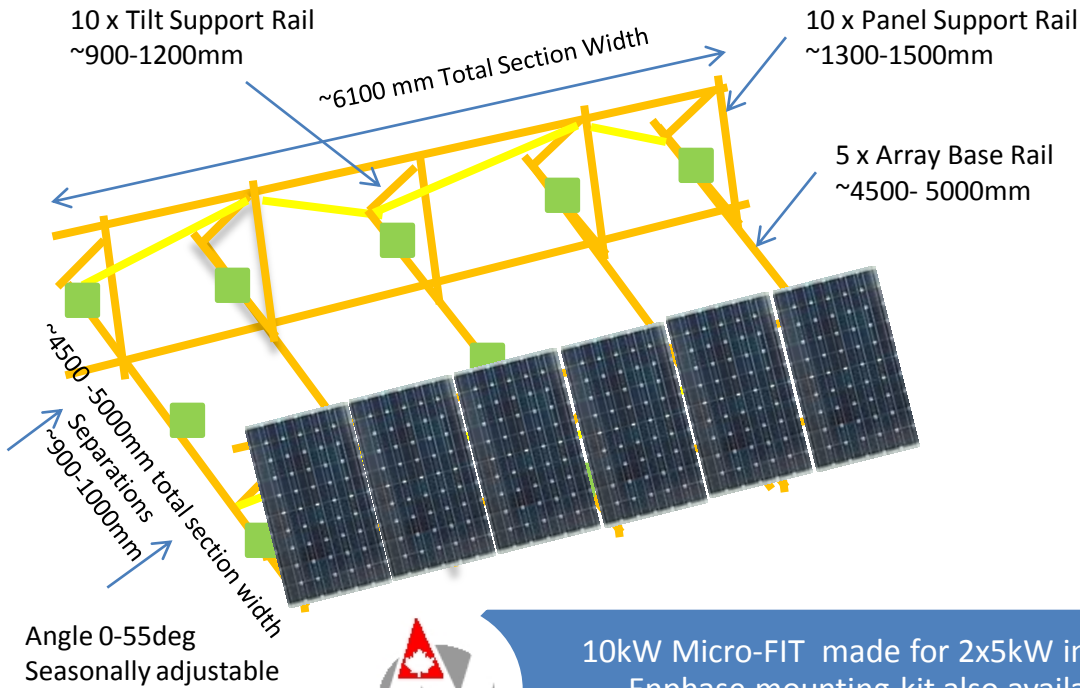


Enphase mounting kit also available. Specify Enphase kits when ordering.

Channellox - Example Tilt Layout



Copyright © 2010 True North Power NG Inc




10kW Micro-FIT made for 2x5kW inverters.
Enphase mounting kit also available.
Specify Enphase kits when ordering.

GENERAL CONFIGURATION ONLY

Basic building set at left
(2x6s wide makes 2 rows of 24 = 10kW)

4sets of 2 rows of 6 panels PORTRAIT
LANDSCAPE orientation for low profile
Sections seasonally adjustable

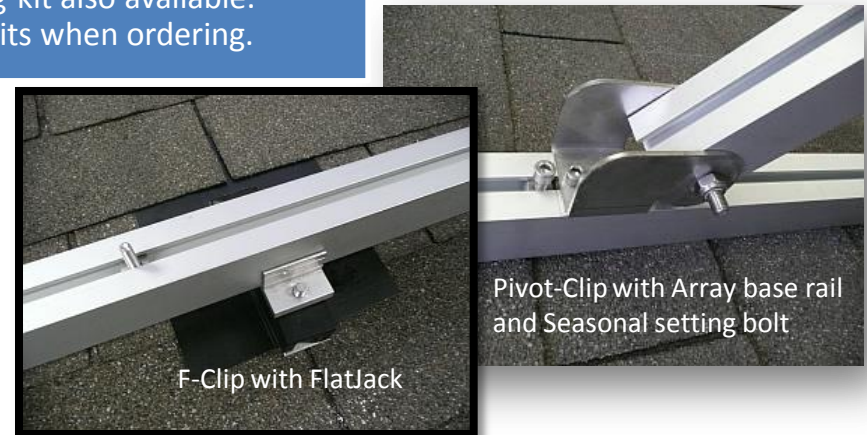
Total 48 panels - 24 panels per row
2 horizontal rails per section
With 200-235w panels ~5k watts per single row

 Ballast or F-Clip/Standoff penetrator

Can be mounted on flat or sloped roof



All panels and sections would be evenly and closely spaced for seasonal adjustment up to 30-50deg winter angle



Channellox - Example Tilt Layout



Typical PV Panel Size Specifications and rail mounting hole placement

Characteristic Data

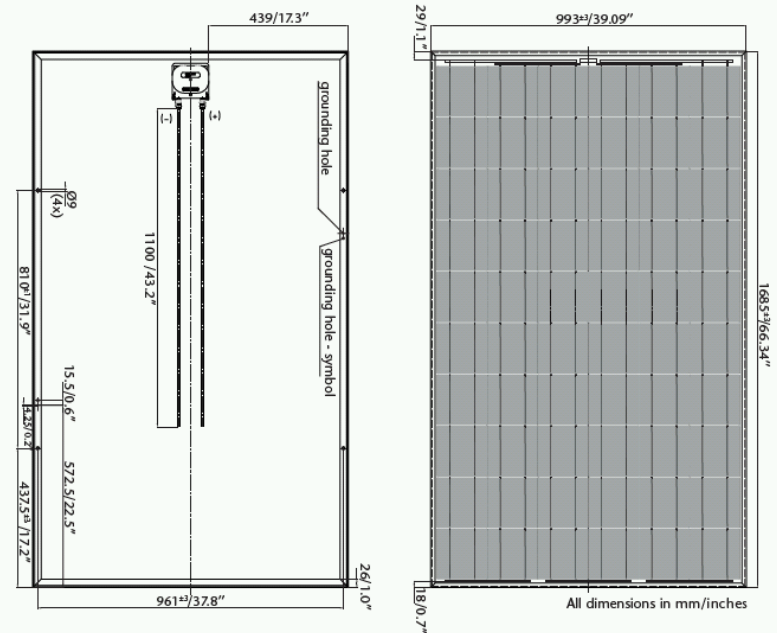


Solar cells per module	60
Cell type	MAIN-Isotextured (polycrystalline silicon) 6" (156 mm x 156 mm), full square
Connection	Junction box with 3 bypass diodes, PV WIRE, 43.3" x 4mm ² , TYCO SolarLok connectors
Front panel	Low-iron solar glass 4 mm
Frame material	Anodized aluminum

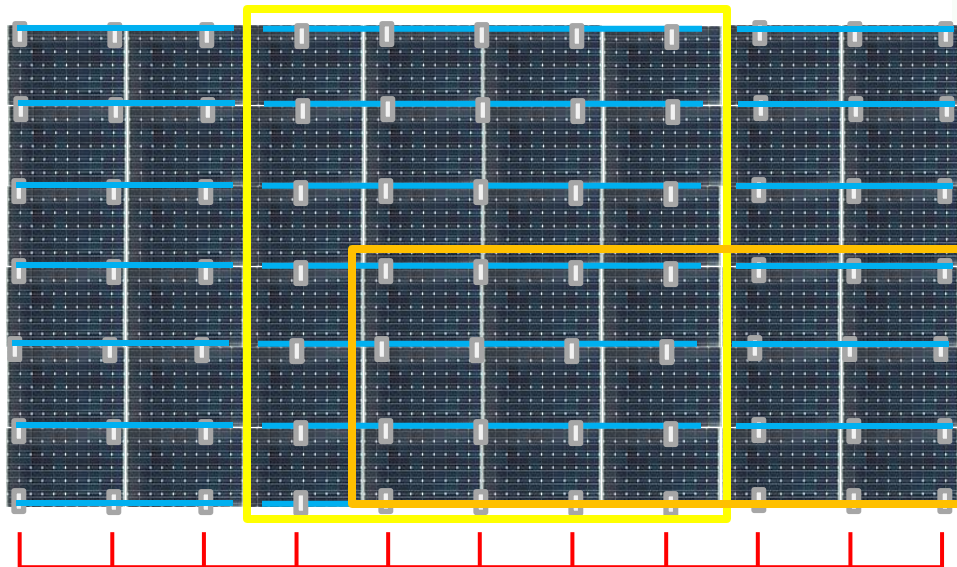
Dimensions and Weight



Dimensions	66.34" (1,685 mm) x 39.09" (993 mm) tolerance ± .118"
Thickness with frame	1.97" (50 mm) tolerance .04"
Weight	Approx. 50.6 lbs. (23.0 kg)



10 kW Roof Mount Configuration - 48 x 200-235w Panels



7 x 5935mm 50x50 rail

14 x 2555mm 50x50 rail

- 77 x F-Clip with FlatJack flashing for asphalt roof
Channellox 100mm Standoff with Flatjack on asphalt
or Channellox/F-Clip alone on steel roof

8 First Row Panel Clip Pack

40 Add-a-row Panel Clip Pack



Optional 15 panel 3.5kW Layout



Optional 5kW 24panel Layout