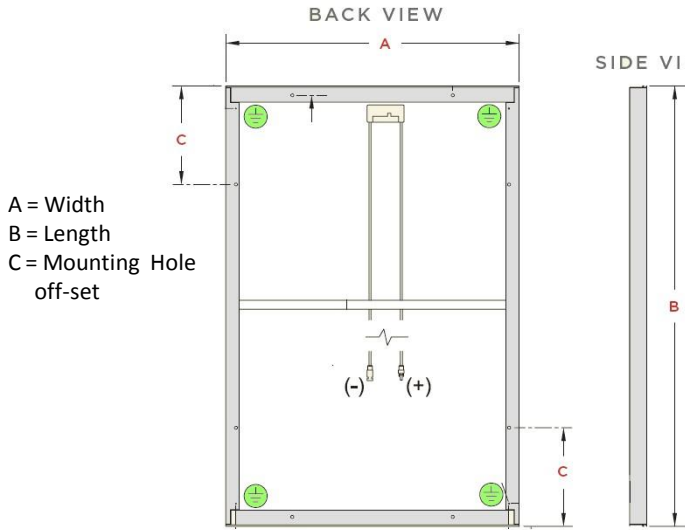
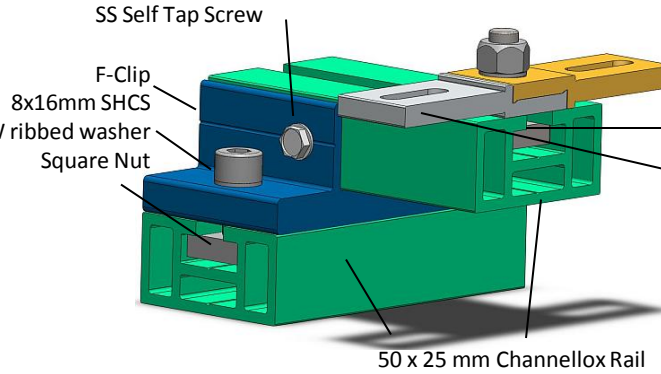


**FOR ORDERING CHANNELLOX SYSTEMS**  
Choose From Standard Rails and Component Packs Below

**Typical Panel Measurements Needed**  
Length, Width and Hole Spacing

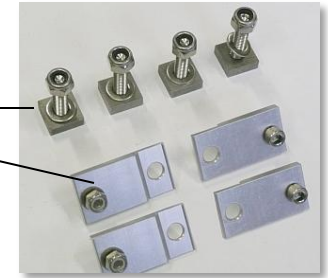


**Assembled configuration**



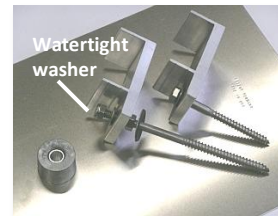
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**Panel Packs**



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

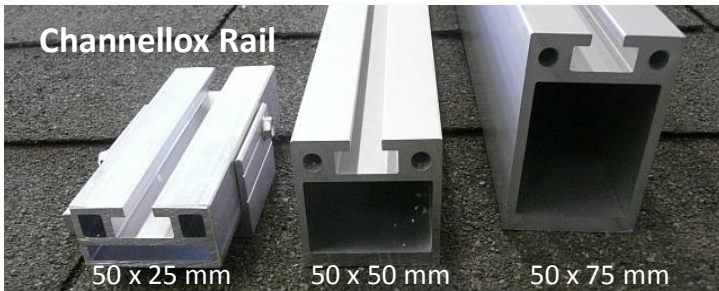
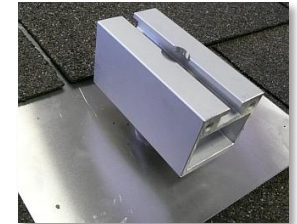
**Roof Penetrator F-Clip Pack**



**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**

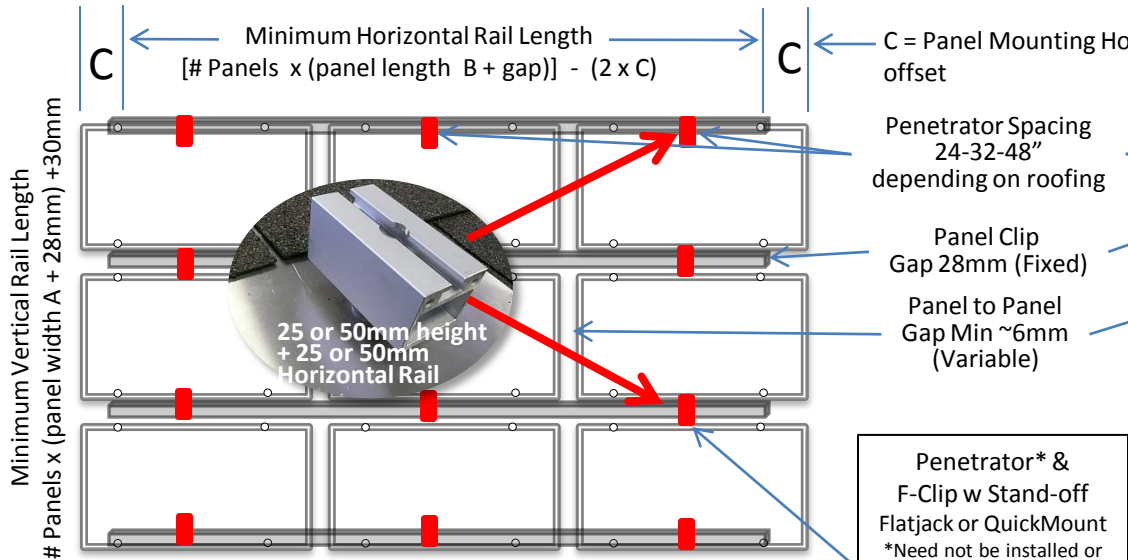


3 Stainless Pivot-Clips with 2 bolts ribbed washers & nuts  
1 50x50mm Tilt Rail  
1 50x50mm Support Rail (lengths cut to order)

# Choosing Rail Size, Lengths and Quantities

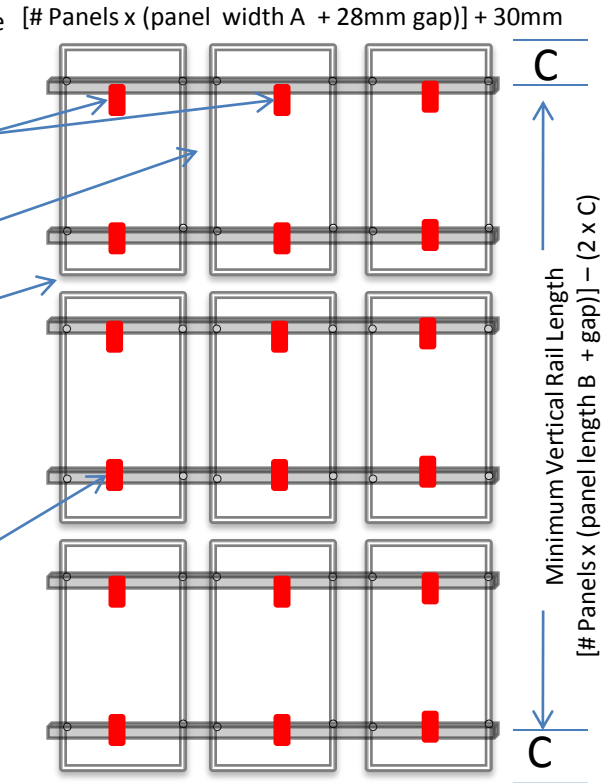
NOTE: Check your panel specification sheet for exact measurements – Choose a rail length longer than the minimum calculations shown

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



## Portrait

Minimum Horizontal Rail Length



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 1<sup>st</sup> 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

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

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 1<sup>st</sup> 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 16t 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

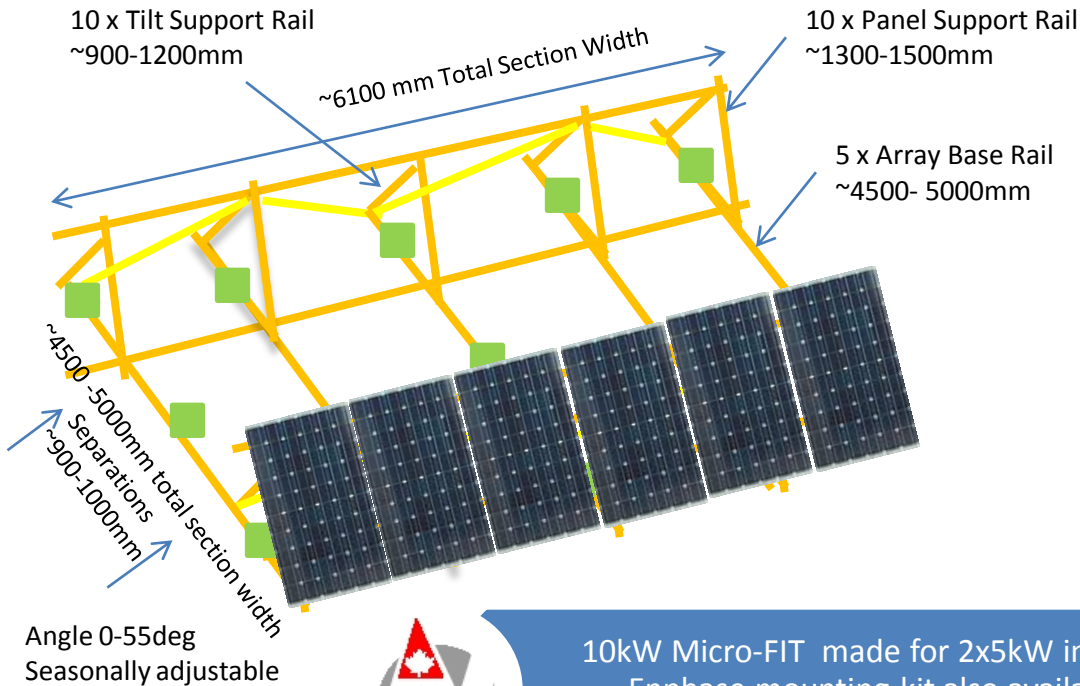


Enphase mounting kit also available.  
 Specify Enphase kits when ordering.

# Channellox - Example Tilt Layout



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

## GENERAL CONFIGURATION ONLY

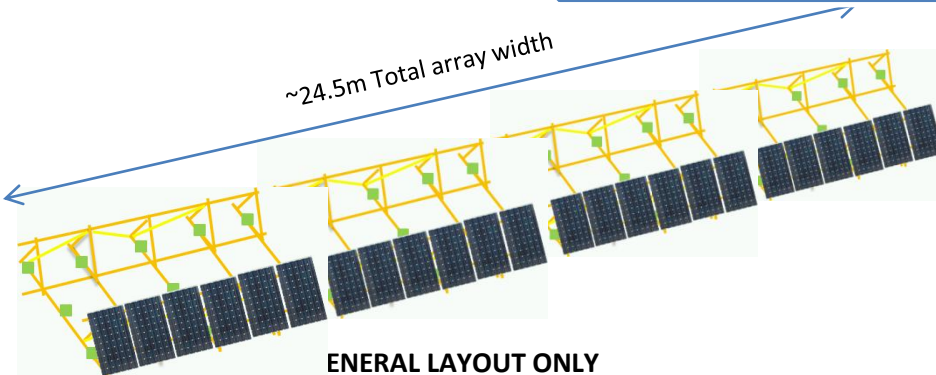
**Basic building set at left**  
( 2x6s wide makes 2 rows of 24 = 10kW)

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

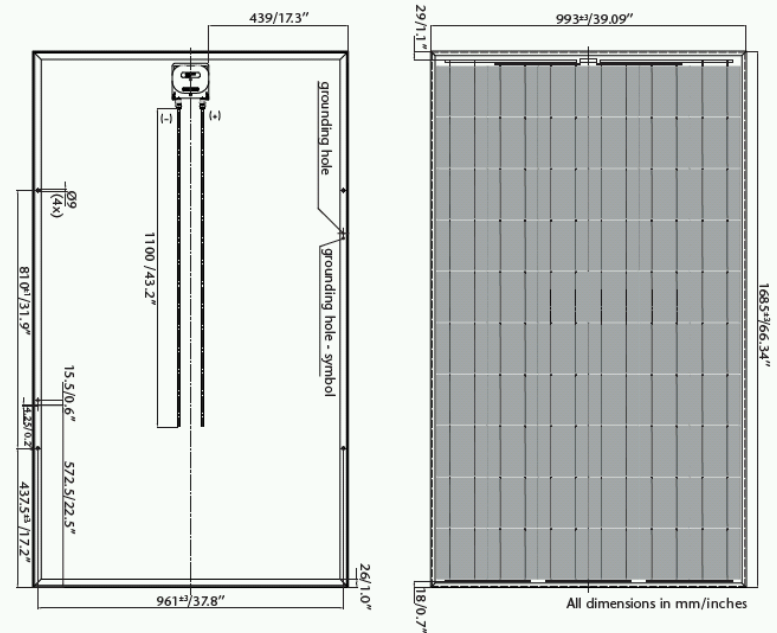


Solar cells per module	60
Cell type	MAIN-Isotextured (polycrystalline silicon) 6" (156 mm x 156 mm), full square
Connection	Junction box with 3 bypass diodes, PV WIRE, 43.3" x 4mm <sup>2</sup> , TYCO SolarLok connectors
Front panel	Low-iron solar glass 4 mm
Frame material	Anodized aluminum

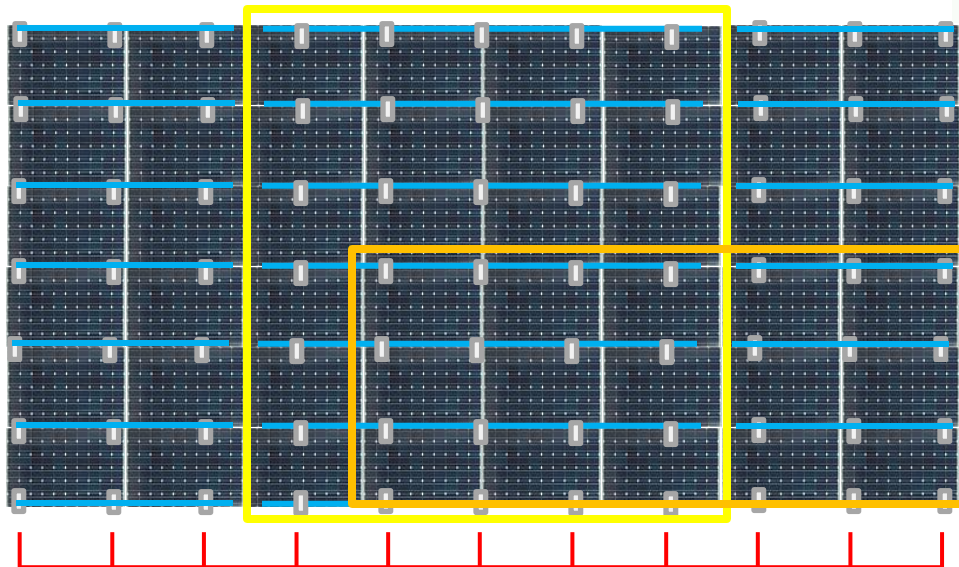
### Dimensions and Weight



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