



# TENSIONED CABLE SYSTEM

For mounting Solar PV Panels

Olympic Energy System's innovative system mounts solar PV panels with no penetrations on the roof and no foundations on the ground.

Patent 8,448,390

Patent 8,763,321



R1



Hold Down



G1

Hang



Hold Down

**AVAILABLE** in kits ready to install

**ADVANTAGES** abound...

Owners and installers need only provide off the shelf:

- Uni-Strut rails for roof systems
- Pier Blocks for ground systems

and use basic fabrication skills.

- Lower mount hardware cost
- Lower mount labor cost
- Lower overall system cost
- Truly Sustainable mounting
- Portable (yet permanent)
- Scalable
- Expandable

Doing more with less, the Tensioned Cable System relies on basic principles and geometry to reduce material content and thus reduce embodied energy in the mounting system, lowering CO<sub>2</sub> emissions.

Parameter	R1S-9-2x12 (1 row each roof)	R1S-9-TBD (Upon Request)	R1-1-2x6	R1-1-2x12
Footprint	12' x 40'	Dependent/spec	13' x 20 1/2'	13' x 40 1/2'
Tilt Angle	Roof Pitch	Roof Pitch	Roof Pitch	Roof Pitch
Linear Feet – PV	78'	<78'	40'	80'
Number of PV	24	<24	12	24
Quantity 10' Rail	Call	Call	22	44
Quantity 5' Rails	-	-	0	0
G. Mount Size	12 inch DIA.	12 inch DIA.	12 inch DIA.	12 inch DIA.
Cable (H/Down)	41 1/2' or as spec	As specified	As specified	As specified
Cable (Anchor)	20'	while ordering	while ordering	while ordering
Cable (S-DOC)	42 1/2' or H/D + 1'		(else 30')	(else 50')
Max Cont. Wind	60 mph	60 mph	60 mph	60 mph
Peak Wind Load	90 mph	90 mph	90 mph	90 mph
Weight – Cable	<15 lbs each	<15 lbs each	<15 lbs each	<15 lbs each
Mount (GM)				
Weight – Cables	<40 lbs set	<40 lbs set	<40 lbs set	<40 lbs set
Weight – Hardware w/o GM	<25 lbs set	<25 lbs set	<25 lbs set	<25 lbs set
Lifetime	25 Years +	25 years +	25 Years +	25 years +
Material				
– Pivot Joint	Aluminum	Aluminum	Aluminum	Aluminum
– Cables	316 SS	316 SS	316 SS	316 SS
– Clamps	Aluminum	Aluminum	Aluminum	Aluminum
– Lift Tensioners	Aluminum	Aluminum	Aluminum	Aluminum
– Cable Mount	Steel/Painted	Steel/Painted	Steel/Painted	Steel/Painted
– Compress. Mem.	Aluminum Square	Aluminum Square	Aluminum Square	Aluminum Square
– Rails	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Warranty	1 year	1 year	1 year	1 year
System Features	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install No roof penetrations	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install No roof penetrations	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install No roof penetrations	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install No roof penetrations

Parameter	G1M-1-20 (The Basic)	G1M-2-20 (Concatenate x2)	G1-2-12 (Low Carbon)	G1-2-14 (Low Carbon)
Footprint	4 1/2' x 34'	4 1/2' x 58'	4' x 35'	4' x 40'
Tilt Angle	30 degrees	30 degrees	30 degrees	30 degrees
Linear Feet – PV	16'-3"	32'-6"	18 feet	22 feet
Number of PV	5	10	6 - 10	8 - 12
Anchor Size	4"x40" gravelly 6"x45" clayey	4"x40" gravelly 6"x45" clayey	4"x40" gravelly 6"x45" clayey	4"x40" gravelly 6"x45" clayey
Cable Length	20'-3" re PV	2 x 20'-3" re PV	25' nom	29' nom
Max Cont. Wind	60 mph	60 mph	60 mph	60 mph
Peak Wind Load	90 mph	90 mph	90 mph	90 mph
Weight – End Stanchions	30 lbs each	30 lbs each	60 lbs each	60 lbs each
Weight – Cables	<40 lbs	<40 lbs	39 lbs	39 lbs
Weight – Hardware w/o Stanchions/Anchors	<25 lbs	<30 lbs	65 lbs	66 lbs
Lifetime	25 Years +	25 years +	25 years +	25 years +
Material				
– Thrust Plate (TP)	304 SS 316 SS	304 SS 316 SS	304 SS 316 SS	304 SS 316 SS
– Cables	Aluminum	Aluminum	Aluminum	Aluminum
– Clamps	Aluminum	Aluminum	Aluminum	Aluminum
– Hangers	Aluminum	Aluminum	Aluminum	Aluminum
– Stanchions	Aluminum	Aluminum	Treated Wood	Treated Wood
– Earth Anchors	Steel/Painted	Steel/Painted	Steel/Painted	Steel/Painted
Warranty	1 year	1 year	1 year	1 year
System Features	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install Dual Opposing Cables No permanent foundations Stanchion folds to ship	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install Dual Opposing Cables No permanent foundations Stanchion folds to ship	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install Dual Opposing Cables No permanent foundations	Integral PV Cable Tensioning Failsafe PV Clamps One person PV install Dual Opposing Cables No permanent foundations



PV Array	Kit R1G-1-	# PM	# LT	Mid Clamps	End Clamps	# S- Nuts	# 10' Rail	# 6' Rail
1x1P	1x1	2	4	0	4	16	0	6 (2 re H)
1x2P	1x2	2	4	2	4	22	0	8 (4 re H)
1x3P	1x3	3	6	4	4	30	0	10(4 re H)
1x4P	1x4	4	8	6	4	34	4	8
1x5P	1x5	4	8	8	4	40	6	8
1x6P	1x6	5	10	10	4	48	6	10
1x7P	1x7	6	12	12	4	52	6	12
1x8P	1x8	6	12	14	4	58	8	12
1x9P	1x9	7	14	16	4	66	8	14
1x10P	1x10	8	16	18	4	70	8	16
1x11P	1x11	8	16	20	4	76	10	16
1x12P	1x12	10	20	22	4	90	12	20
1x13P	1x13	11	22	24	4	98	12	22
1x14P	1x14	11	22	26	4	100	12	22
2x1P	2x1	2	4	0	8	24	4	4 re H
2x2P	2x2	2	4	4	8	36	4	8 re H
2x3P	2x3	3	6	8	8	48	6	8 re H
2x4P	2x4	4	8	12	8	52	16	0
2x5P	2x5	4	8	16	8	64	20	0
2x6P	2x6	5	10	20	8	76	22	0

Etcetera to 3x14P



Sunset the old...  
and give rise  
to the NEW...  
The TCS

## Kits available:

**R1S (w/ EA's) & R1 (no EA's)**  
**G1M (metal) & G1 (treated)**

Example:

**G1M-1-20-D5-S8-PB-U-PV5**

**D5** = 1.80" Depth 1=1.34, 2=1.40, 3=1.60,  
4=1.68, **5=1.80**, 6=1.90, 7=2.00

**S8** = PV Frame Back Edge width (8x.125" = 1" typ)

**PB** = Pier Blocks in kit; **U** = Unassembled (folded)

**PV5** = 5 (number of PV panels / span)

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