

SERIES 100 UL ROOF MOUNT SYSTEM

SnapNrack Solar Mounting Solutions

The SnapNrack line of solar mounting solutions is designed to reduce total installation costs. The system's technical innovations have been proven to drive down costs and improve installation quality on more than 350 MW of solar installations.

Pitched Roof Arrays Simplified

The SnapNrack Series 100 UL Roof Mount System is an efficient, visually appealing, photovoltaic (PV) module installation system. Series 100 UL is listed to the UL 2703 Standard for Bonding, meaning that all system components have been certified by UL for electrical continuity, eliminating the need for additional grounding hardware. The System's components provide an adequate bonding path which has eliminated the need for grounding lugs and washers at each module, and bonding jumpers between splices. The UL 2703 Certification ensures that SnapNrack partners can provide the best in class installations in quality, safety, and efficiency.

- All bonding hardware is fully integrated into the components
- No grounding lugs required for modules
- Rail splices bond rails together, no rail jumpers required
- Proprietary SnapNrack grounding lug snaps in the rail channel, no drilling of rail or reaching for other tools required (One Lug per individual row of modules)

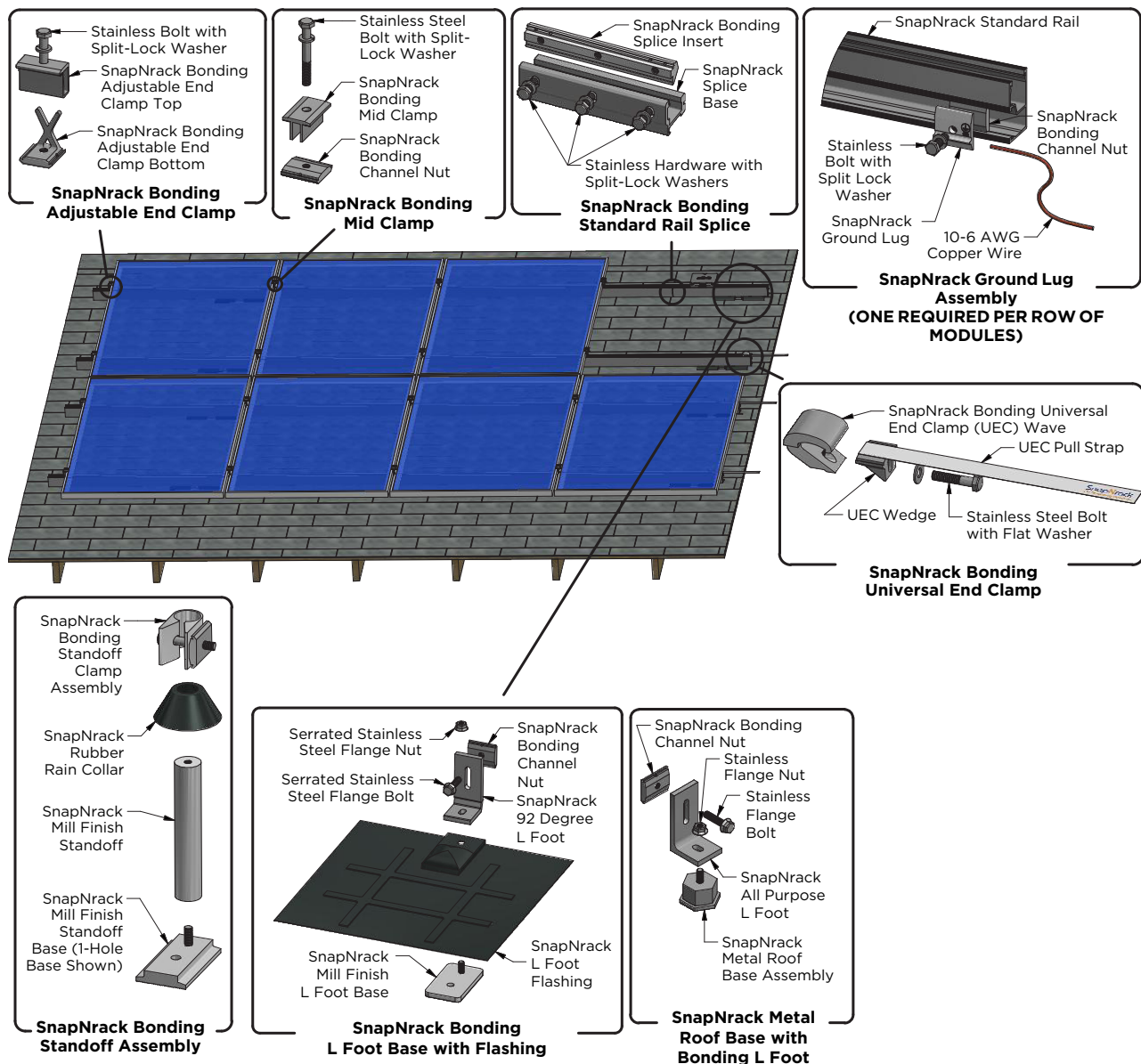
Patent Pending



Roof System in 4 Simple Steps:

- 1) Go to the online Series 100 Configuration Tool (configure.snapnrack.com) and select "Yes" for UL 2703 Listed
- 2) Identify Site Conditions (Array Tilt, Building Height, Roof Type, Wind and Snow Loads)
- 3) Build array in the online Configuration Tool and automatically generate a Bill of Materials.
- 4) Place order with your distributor. Purchase material for a single project or order in bulk for additional savings





SnapNrack Series 100 UL Technical Data Patent Pending

Materials	• 6000 Series aluminum • Stainless steel • Galvanized Steel Flashing
Material Finish	• Clear and black anodized aluminum • Mill Finish on select components
Installation	• Quick and efficient mounting • Adjustable hardware to ensure clean and level finish • All components bonded to ground with integrated bonding features
Calcs. & Certifications	• UL 2703 Certification • Stamped Structural Engineering Reports for all 50 States
Grounding	• SnapNrack Grounding Lug (One Lug per individual row of modules)
Warranty	• 10 Year material and workmanship (download full details at snapnrack.com)

SnapNrack™
Solar Mounting Solutions

(877) 732-2860 www.SnapNrack.com

Printed on recycled paper using soy based inks.

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Poly

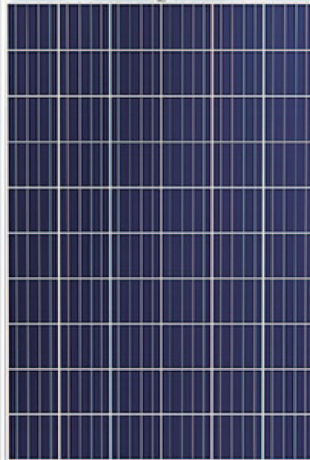
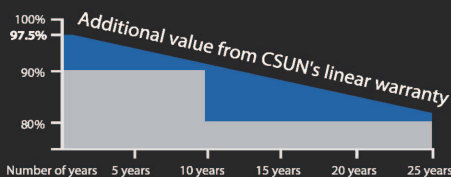


Powerguard Insurance Global Coverage

The power output shall not be less than 97.5% of the minimum power output stated in the product data sheet in the first year of the product's life cycle. The loss of power output shall not exceed 0.7% per year thereafter, ending with 80.7% in the 25th year.

■ CSUN ■ Standard warranty

CSUN's NEW linear performance warranty



CSUN275-60P

Standard residential offer

Module Fire Performance: Type 1 (UL 1703)

Fire Resistance Rating: Class C (IEC 61730)

CSUN275-60P CSUN270-60P

CSUN265-60P CSUN260-60P

CSUN255-60P

16.94%

Module efficiency

275 W

Highest power output

10 years

Material & workmanship warranty

25 years

Linear power output warranty



Industry leading conversion efficiency



Positive tolerance offer



Passed salt mist & ammonia corrosion, blowing sand and hail testing



Certificated to withstand wind (2400 Pa) and snow load (5400 Pa)



Excellent performance under weak light condition



Good temperature coefficient enables better output in hot climates

- China Sunergy Co., Ltd. designs, manufactures and delivers high efficiency solar cells and modules to the world from its production centers based in China, Turkey, South Korea and Vietnam.
- Founded in 2004, China Sunergy is well known for its advanced solar cell technology, reliable product quality, and excellent customer service.
- As one of leading PV enterprises, China Sunergy has delivered more than 4.0GW of solar products to residential, commercial, utility and off-grid projects all around the world.

* Note: All specifications, warranties, certifications about module of „CSUN“ series also apply to that of „SST“.

All information and data are subject to change without notice.



www.csun-solar.com



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Electrical Characteristics at Standard Test Conditions (STC)

Module Type	CSUN 275-60P	CSUN 270-60P	CSUN 265-60P	CSUN 260-60P	CSUN 255-60P
Maximum Power - P _{mpp} (W)	275	270	265	260	255
Positive Power Tolerance	0~3%	0~3%	0~3%	0~3%	0~3%
Open Circuit Voltage - Voc (V)	380	379	37.7	37.6	37.5
Short Circuit Current - Isc (A)	9.15	9.08	9.01	8.94	8.92
Maximum Power Voltage - V _{mpp} (V)	30.9	30.7	30.5	30.3	30.1
Maximum Power Current - I _{mpp} (A)	8.91	8.80	8.69	8.58	8.47
Module Efficiency	16.94%	16.63%	16.32%	16.01%	15.70%

Electrical data relates to standard test conditions (STC): Irradiance 1000W/m²; AM 1.5; cell temperature 25°C measuring uncertainty of power is within ±3%. Certified in accordance with IEC61215, IEC61730-1/2 and UL 1703

Electrical Characteristics at Normal Operating Cell Temperature (NOCT)

Module Type	CSUN 275-60P	CSUN 270-60P	CSUN 265-60P	CSUN 260-60P	CSUN 255-60P
Maximum Power - P _{mpp} (W)	211	198	195	192	188
Maximum Power Voltage - V _{mpp} (V)	28.4	28.3	28.2	28.1	28.0
Maximum Power Current - I _{mpp} (A)	7.10	7.01	6.92	6.82	6.72
Open Circuit Voltage - Voc (V)	35.8	35.5	35.2	34.9	34.6
Short Circuit Current - Isc (A)	735	730	725	7.20	7.16

Electrical data relates to normal operating cell temperature (NOCT): Irradiance 800W/m²; wind speed 1 m/s; cell temperature 45°C; ambient temperature 20°C measuring uncertainty of power is within ±3%.

Temperature Characteristics

Voltage Temperature Coefficient	-0.292%/K
Current Temperature Coefficient	+0.045%/K
Power Temperature Coefficient	-0.408%/K

Maximum Ratings

Maximum System Voltage (V)	1000
Series Fuse Rating (A)	20
Reverse Current Overload (A)	27

Mechanical Characteristics

Dimensions	1640 × 990 × 35 mm
Weight	18.3 kg
Frame	Anodized aluminum profile
Front Glass	White toughened safety glass, 3.2 mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back Sheet	Composite film
Cells	6x10 polycrystalline solar cells (4BB or 5BB 156 X156mm)
Junction Box	Rated current ≥ 12A, IP ≥ 65, TUV&UL
Cable	Length 900 mm, 1 × 4 mm ²
Connector	MC 4/ compatible with MC 4

Packaging

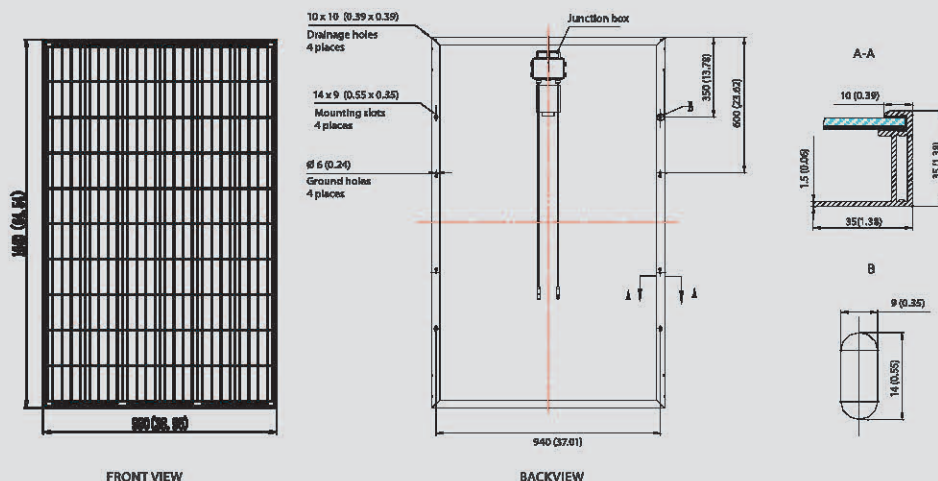
Container 20'	360 pcs.
Container 40'	840 pcs.
Container 40'HC	910 pcs.

System Design

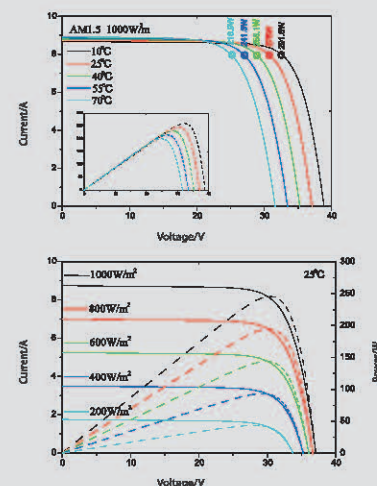
Temp. Range	-40°C to +85°C
Hail	max. diameter of 25mm with impact speed of 23m/s
Max. Capacity	Snow 5400 Pa, wind 2400 Pa
Application Class	A
Safety Class	II

Dimensions

Note: mm (inch)



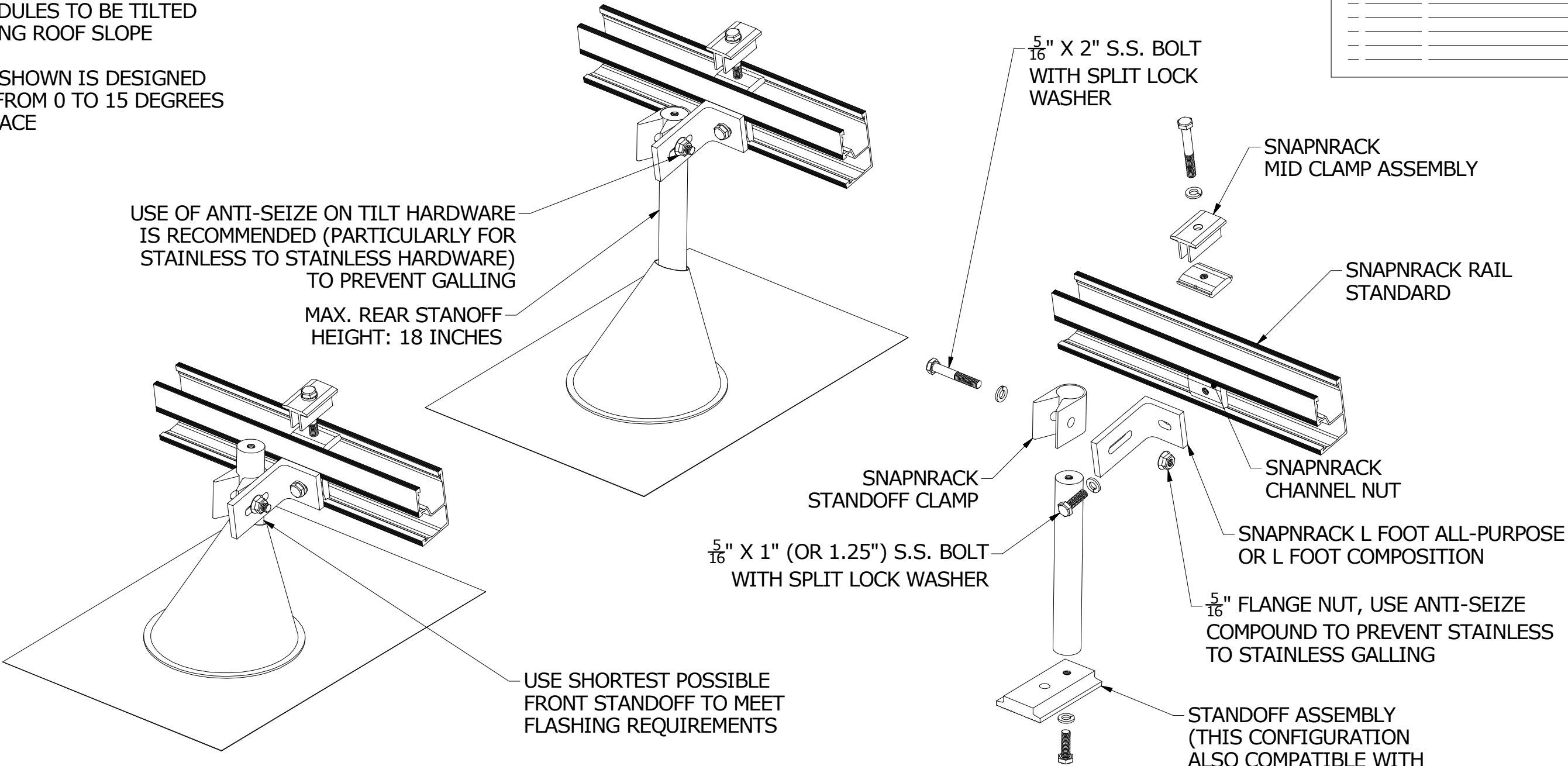
IV-Curves



USE TILT KIT OPTION FOR INSTALLATIONS THAT REQUIRE MODULES TO BE TILTED ABOVE THE EXISTING ROOF SLOPE

LOW TILT SYSTEM SHOWN IS DESIGNED FOR TILT ANGLES FROM 0 TO 15 DEGREES ABOVE ROOF SURFACE

REVISION:		



NOTES:

- TORQUE $\frac{5}{16}$ " HARDWARE TO THE FOLLOWING UNLESS OTHERWISE NOTED:
 - SILVER S.S. 10-16 FT-LBS
 - BLACK S.S. 7-9 FT-LBS
- REFER TO ENGINEERING CHARTS FOR RAIL SPAN BASED ON MODULE TILT ANGLE, WIND SPEED, AND NOW LOAD
- BACK SUPPORT "LEG" IS FABRICATED FROM A SCRAP OF RAIL. CALCULATE REQUIRED TILT LEG LENGTH. CUT RAIL AND DRILL TWO $\frac{3}{8}$ " HOLES AS SHOWN
- FOR LOWER TILT APPLICATIONS SEE "SERIES 100 TILT KIT 0-15 DEG"
- SNAPNRACK RAIL COVER CAN BE USED TO COVER CHANNEL IN REAR TILT LEG

	MAINSTREAM ENERGY CORP. 775 FIERO LANE, SUITE 200 • SAN LUIS OBISPO, CA 93401 USA PHONE (805) 528-9705 • FAX (805) 528-9701 THE INFORMATION IN THIS DRAWING IS CONFIDENTIAL AND PROPRIETARY. ANY REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF MAINSTREAM ENERGY CORPORATION.	DESIGNER: <u>G McPheeters</u> DRAFTER: <u>D Ryan</u> APPROVED BY: _____	SCALE: DNS	PART NUMBER: S100 D08	DESCRIPTION: SERIES 100 TILT KITS 0-15 DEG	REV F
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