DRS-TK-3

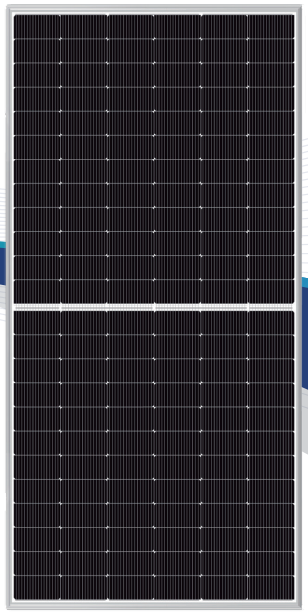
HYPERION SOLAR

MADE IN THAILAND

HY-DH144N8

560-585W

144 Pieces | HALF-CELL | N-Type



22.6% Max.Efficiency

N-Type
Bifacial & Dual Glass

High Conversion Efficiency

Module efficiency up to 22.6% based on N-Type wafer and advanced N-Type cell technology

Excellent Energy Yield

More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality

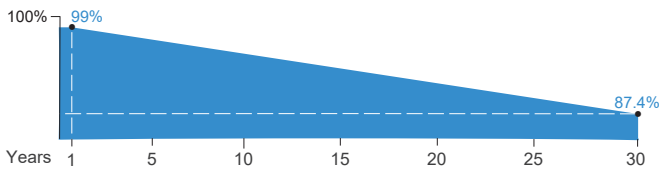
Outstanding Anti-degradation

Unsusceptible to LID, LeTID and less annual degradation due to special charateristics of N-Type

Quality Guarantee

High module quality ensures long-term reliability

IEC61215 / IEC61730 / UL61730
IEC61701 / IEC62716 / IEC60068
ISO9001 / ISO14001/ ISO45001



Hyperion N-Type Dual Glass Product Performance Warranty

12 Years Product Warranty

30 Years Linear Power Warranty

1% First Year Degradation

0.4% Annual Power Degradation

American Hyperion Solar LLC.
2880 Zanker Road, Suite 203, San Jose, CA 95134

info@hyperion-usa.com
www.hyperion-solar.com

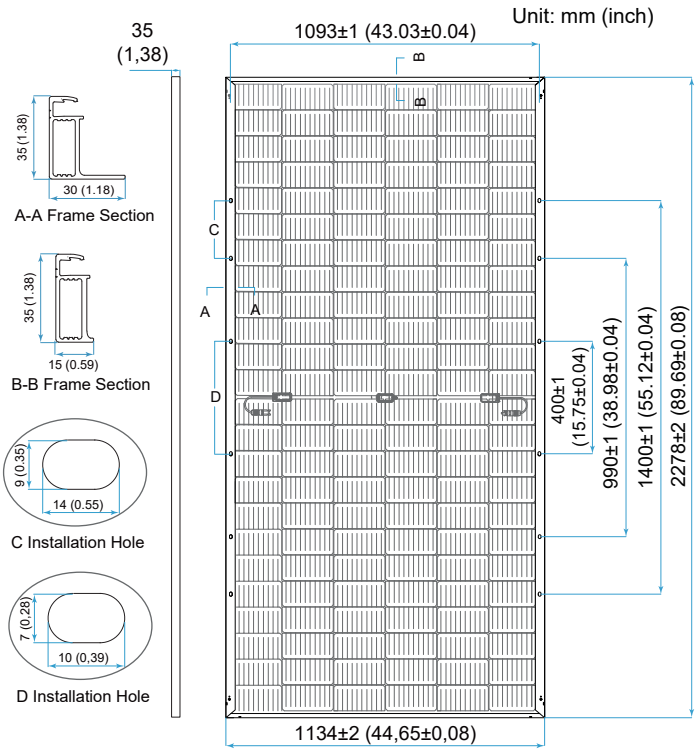
HY-DH144N8-560/585

Mechanical Parameters

Solar Cell	Mono N-Type 182 mm
No. of Cells	144(6 × 24)
Dimensions	2278 × 1134 × 35mm(89.69× 44.65 × 1.38in.)
Weight	32.7kg(72.09lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm² (IEC), 12 AWG(UL) +400/-200mm (+15.75/-7.87in.) or customized
Connector	RY01 or similar
Front Cover	2.0mm (0.079in.)semi-tempered AR glass
Back Cover	2.0mm (0.079in.)semi-tempered glass
Container	31 pcs/Pallet, 558 pcs/40' HC

Operating Parameters

Max. System Voltage	DC 1500V（IEC/UL）
Operating Temperature	-40°C ~ +85°C(-40°F ~ +185°F)
Max. Fuse Rating	30A
Frontside Max. Loading	5400Pa(112lb/ft²)
Backside Max. Loading	2400Pa(50lb/ft²)
Bifaciality	80%±5%
Fire Resistance	IEC Class A , UL Type 29



Electrical Characteristics - STC

Irradiance 1000 W/m², ambient temperature 25 °C, AM1.5.

Maximum Power at STC (Pmax/W)	585	580	575	570	565	560
Power Tolerance (W)	0 ~ +5					
Optimum Operating Voltage (Vmp/V)	42.74	42.59	42.44	42.29	42.14	41.95
Optimum Operating Current (Imp/A)	13.69	13.62	13.55	13.48	13.41	13.35
Open Circuit Voltage (Voc/V)	51.67	51.47	51.27	51.07	50.87	50.67
Short Circuit Current (Isc/A)	14.43	14.37	14.31	14.25	14.19	14.13
Module Efficiency	22.6%	22.5%	22.3%	22.1%	21.9%	21.7%

Electrical Characteristics - NMOT

Irradiance 800 W/m², ambient temperature 20 °C, AM1.5, wind speed 1 m/s.

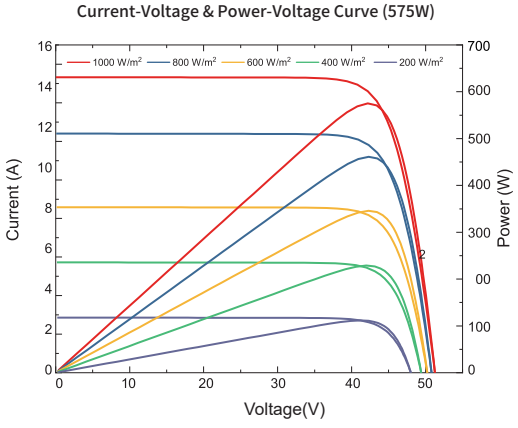
Maximum Power at NMOT (Pmax/W)	446.5	442.7	438.9	435.0	431.3	427.4
Optimum Operating Voltage (Vmp/V)	40.92	40.77	40.63	40.49	40.34	40.16
Optimum Operating Current (Imp/A)	10.91	10.86	10.80	10.75	10.69	10.64
Open Circuit Voltage (Voc/V)	49.47	49.27	49.08	48.89	48.70	48.51
Short Circuit Current (Isc/A)	11.61	11.56	11.51	11.46	11.41	11.37

Rearside Power Gain (Reference to 585W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	614	673	731
Optimum Operating Voltage (Vmp/V)	42.74	42.84	42.84
Optimum Operating Current (Imp/A)	14.37	15.70	17.07
Open Circuit Voltage (Voc/V)	51.67	51.77	51.77
Short Circuit Current (Isc/A)	15.15	16.56	18.00
Module Efficiency	23.8%	26.1%	28.3%

Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 °C
Nominal Cell Operating Temperature	45 ± 2 °C
Temperature Coefficient of Pmax	-0.31%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	0.05%/ °C



Specifications included in this datasheet are subject to change without notice.

OMCO SOLAR®

OMCO Origin™

FACTORY-DIRECT TRACKERS

One-In-Portrait

- ADJUSTABLE BEARINGS = FASTER INSTALLATION AND COMPENSATION FOR POST MISALIGNMENT
- 4 STRINGS = FEWER MOTORS AND CONTROLLERS PER MW
- WIDEST RANGE OF MOTION = HIGHEST KWH PRODUCTION
- BALANCED TRACKER = LOW ENERGY CONSUMPTION & LONG, STRAIGHT ROWS
- HIGH DOMESTIC CONTENT - MADE BY OMCO SOLAR IN OUR 6 US MANUFACTURING PLANTS
- ADDED STRUCTURE FOR LARGE FORM FACTOR MODULES = REDUCED RISK OF MICRO-CRACKS

OMCO Origin One-In-Portrait Tracker Technical Specifications

Tracking Technology	Single-row, horizontal, balanced, single-axis
Tracking Range	120°
Modules and Configurations	1-in-portrait Monofacial and bifacial modules Framed silicon module – Up to 120 per tracker First Solar Series 6 & Series 7 modules – Up to 96 per tracker
Dimensions	Height – Modules at 60° – 2.4 m (7.8 feet) Width – Modules horizontal – 2.0 m (6.5 feet) Length – Up to 122 m (400 feet)
Foundations	Driven C posts – OMCO produced, lower cost, faster lead time Driven I or W posts – OMCO sourced OMCO Ground Screw Foundations
Structural Materials	Galvanized steel per ASTM A653
Drive	1 slew drive per tracker 20 drives per MW (typical)
Motor	1 24-volt dc motor per tracker 20 motors per MW (typical)
Control System	1 tracker control unit mounted to each tracker with internal inclinometer DC with 30 or 60-watt module and long-life $LiFePO_4$ battery AC up to 264 vac input 1 network controller per 100 – 150 trackers (wireless) 1 or more meteorological stations per site 1 remote access unit per site – datalogger and modem
Communication	Network controller to tracker controllers: MODBUS over Zigbee wireless Network controller to SCADA: MODBUS TCP/IP over ethernet Cloud app available for remote monitoring and predictive maintenance
Step Size	1°
Tracking Algorithm	Based on United States Naval Observatory Solar Position Algorithm Tracking accuracy ±2°
Backtracking	Optional – Optimized for each tracker based on topography
Night Stow	Yes
Wind Stow	Yes
Snow Stow	Yes
Snow Sensor	Optional
Flood Sensor	Optional
Bearings	Self-lubricating, long-life polymer blend wear surfaces Adjustable in multiple dimensions to take up post misalignment Delivered fully assembled from the OMCO Solar factory
North-South Slopes	Up to 15%
Installation	No welding or cutting in the field
Compliance	UL3703, ASCE7

omcosolar.com
Arizona | Ohio | Indiana | Alabama
602-352-2700 | info@omcosolar.com

ISO 9001 Quality

250/275kW V2, 1500Vdc String Inverters for North America

CPS SCH275KTL-DO/US-800

The 250/275 kW high power CPS three-phase string inverters are designed for ground-mount applications. The units are high performance, advanced, and reliable inverters designed specifically for the North American environment and grid. High efficiencies, wide operating voltages, broad temperature ranges, and NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The SCH275KTL inverters include a selectable active power of either 250 kW or 275 kW (factory default) with 12 MPPTs and are available with either 36 fused PV string inputs or 24 unfused PV string inputs. The CPS FlexOM solution enables communication, controls and remote product upgrades.

Key Features

- **Anti-PID function**
- **Reactive Power at Night function**
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated DC disconnect switch
- Protection functions for enhanced reliability and safety
- Selectable max AC active power of 250 kW or 275 kW
- UL 1741-SA certified to CA Rule 21, including SA14-SA18
- 12 MPPTs with 36 fused inputs or 24 unfused inputs
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated, tough tested enclosure
- Full power capacity up to 42°C
- Standard 5-year warranty with extensions to 20 years
- Supported comm protocols (Modbus RTU, TCP/IP, PLC, **CAN**)
- UL 1741-SB and IEEE 1547-2018 certified

C US

This device complies with part 15 of the FCC Rules

Chint Power Systems America
1380 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

Model Name	CPS SCH275KTL-DO/US-800-36 V2	CPS SCH275KTL-DO/US-800-24 V2
DC Input		
Max. DC input voltage range	1500 V	
Operating DC input voltage range	500-1450 Vdc	
Start-up DC input voltage / power	550 Vdc / 500 W	
MPPT voltage range for Pnom @ PF>0.99[1]	900-1300 Vdc	
Number of MPP trackers	12	
Max. PV input current (clipping point)	30 A per MPPT	
Production Limits	36.5 kW/MPPT or 275 kW total output	
Max. PV short-circuit current	600 A, 50 A per MPPT	
Number of DC inputs	36 fused inputs, 3 per MPPT	24 non-fused inputs
DC disconnection type	Load-rated DC switches	
DC surge protection	Type II	
AC Output		
Max AC output power (selectable[2]) @ PF>0.99	250 kW / 275 kW	
Max. AC apparent power	275 kVA	
Rated output voltage	800 Vac	
Output voltage range[3]	704-880 Vac	
Grid connection type	3-phase / PE	
Max. AC output current @ 800 Vac	198.5 A	
Rated output frequency	60 Hz	
Output frequency range[3]	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	
Current TRD @ rated load	< 3%	
Max. OCPD rating	300 A	
AC surge protection	Type II	
System and Performance		
Max. efficiency	99.0%	
CEC efficiency	98.5%	
Standby / night consumption	5 W	
Environment		
Enclosure protection degree	NEMA 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range	-22°F to 140°F / -30°C to 60°C (derate from 107°F / 42°C)	
Non-operating temperature range	-40°F to 140°F (-40°C to 60°C)	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	< 80 dBA @ 1 m and 77°F (25°C)	
Display and Communication		
User interface and display	LED indicators, Wi-Fi and app	
Inverter monitoring	Modbus RS485 / PLC[4] / CAN	
Site-level monitoring	CPS FlexOM (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (H × W × D)	27.2 × 41.3 × 15.7 (690 × 1050 × 400 mm)	
Weight	Inverter: 262 lbs (119 kg)	
Mounting / installation angle	Vertical installation	
AC termination	Stud type terminal (wire range: 4/0 AWG - 750 kcmil AL/CU, lugs not supplied)	
DC termination	36 fused input: screw clamp fuse holder (wire range #14-#8 AWG CU) 24 non-fused input: screw clamp terminal (wire range #14-#8 and #6-#4 AWG CU)[5]	
Fused string inputs (3 per MPPT)[6]	25 A fuses provided (values up to 30 A acceptable)	
Safety		
Certifications and standards	UL1741-SA/SB Ed.3, CSA-C22.2 NO.107.1-16, IEEE1547a-2014, IEEE 1547-2018; FCC PART 15	
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018, CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Vol-Watt	
Protection Functions		
Reactive Power at Night	Yes	
Anti-PID function	Yes	
Insulation resistance monitoring	Yes	
Onboard fault oscillography	Yes	
PV MPPT current monitoring	Yes	
Residual current monitoring	Yes	
Output short-circuit protection	Yes	
Output overvoltage protection	Yes	
Warranty		
Standard	5 years	
Extended terms	10, 15, and 20 years	

1) See user manual for information regarding MPPT voltage range when operating at non-unity PF.
2) Inverter is factory set to 275 kW by default. Contact CPS to enable the 250 kW setting.
3) The output voltage range and output frequency range may differ according to the specific grid standard.
4) CPS AC-PLC Kit required for AC PLC communication.
5) One threaded hole per MPPT for connecting #6-#4 AWG CU.
6) Fused string inputs only applicable to the SCH275KTL 36-input model.

Three-phase pad-mounted compartmental type transformer

General

At Eaton, we are constantly striving to introduce new innovations to the transformer industry, bringing you the highest quality, most reliable transformers. Eaton's Cooper Power series Transformer Products are ISO 9001 compliant, emphasizing process improvement in all phases of design, manufacture, and testing. In order to drive this innovation, we have invested both time and money in the Thomas A. Edison Technical Center, our premier research facility in Franksville, Wisconsin. Such revolutionary products as distribution-class UltraSIL™ Polymer-Housed Evolution™ surge arresters and Envirotemp™ FR3™ fluid have been developed at our Franksville lab.

With transformer sizes ranging from 45 kVA to 12 MVA and high voltages ranging from 2400 V to 46 kV, Eaton has you covered. From fabrication of the tanks and cabinets to winding of the cores and coils, to production of arresters, switches, tap changers, expulsion fuses, current limit fuses, bushings (live and dead) and molded rubber goods, Eaton does it all. Eaton's Cooper Power series transformers are available with electrical grade mineral oil or Envirotemp™ FR3™ fluid, a less-flammable and bio-degradable fluid. Electrical codes recognize the advantages of using Envirotemp™ FR3™ fluid both indoors and outdoors for fire sensitive applications. The bio-based fluid meets Occupational Safety and Health Administration (OSHA) and Section 450.23 NEC Requirements.

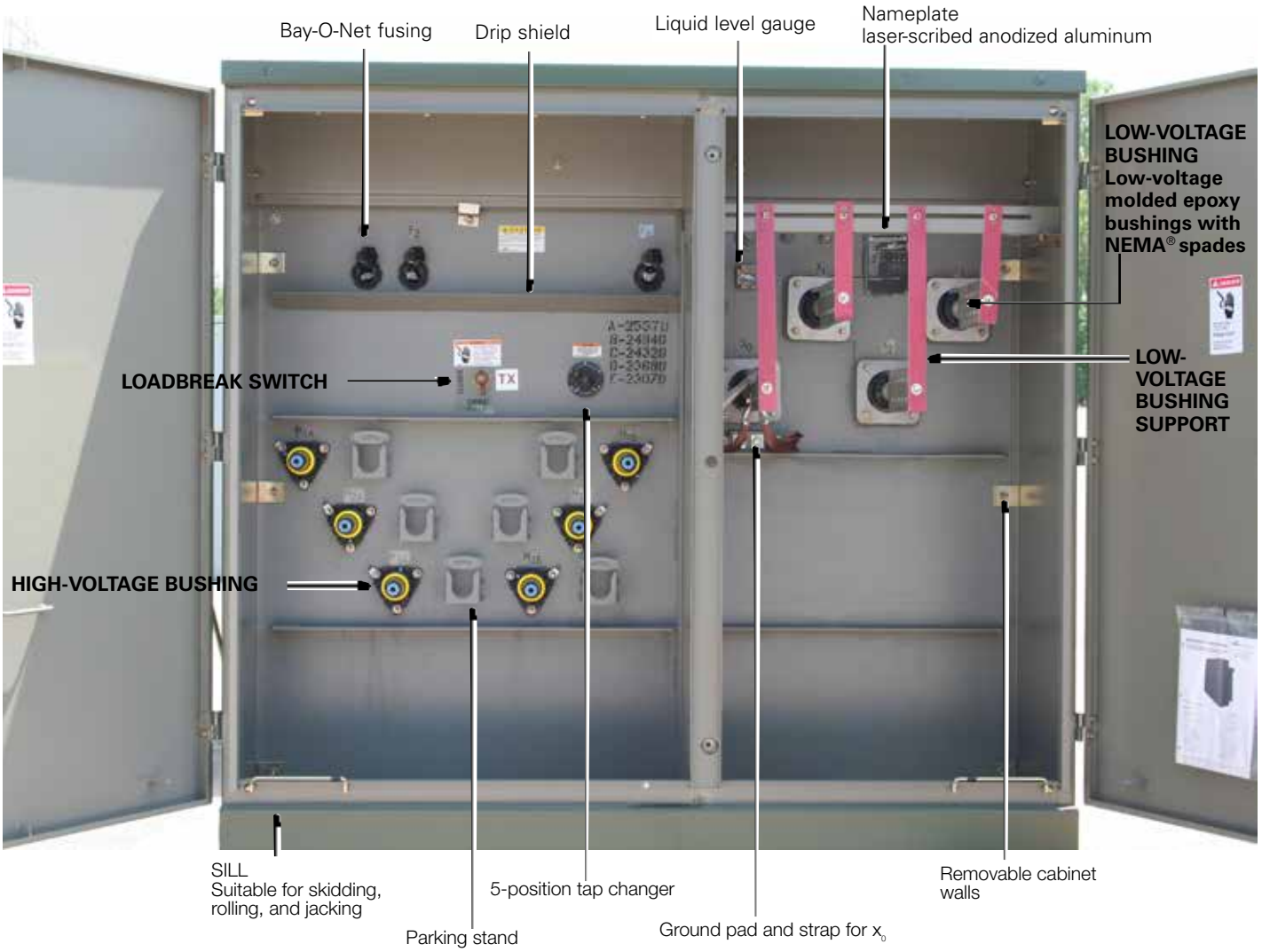


Figure 1. Three-phase pad-mounted compartmental type transformer.

Table 1. Product Scope

Type	Three Phase, 50 or 60 Hz, 65 °C Rise (55 °C, 55/65 °C), 65/75 °C, 75 °C
Fluid Type	Mineral oil or Envirotemp™ FR3™ fluid
Coil Configuration	2-winding or 4-winding or 3-winding (Low-High-Low), 3-winding (Low-Low-High)
Size	45 – 10,000 kVA
Primary Voltage	2,400 – 46,000 V
Secondary Voltage	208Y/120 V to 14,400 V
Specialty Designs	Inverter/Rectifier Bridge
	K-Factor (up to K-19)
	Vacuum Fault Interrupter (VFI)
	UL® Listed & Labeled and Classified
	Factory Mutual (FM) Approved®
	Solar/Wind Designs
	Differential Protection
	Seismic Applications (including OSHPD)
	Hardened Data Center

Table 2. Three-Phase Ratings

Three-Phase 50 or 60 Hz
kVA Available[1]: 45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000, 7500, 10000

[1]Transformers are available in the standard ratings and configurations shown or can be customized to meet specific needs.

Table 3. Impedance Voltage

	Low-voltage rating		
Rating (kVA)	**≤ 600 V**	**2400 Δ through 4800 Δ**	**6900 Δ through 13800GY/7970 or 13800 Δ**
45-75	2.70-5.75	2.70-5.75	2.70-5.75
112.5-300	3.10-5.75	3.10-5.75	3.10-5.75
500	4.35-5.75	4.35-5.75	4.35-5.75
750-2500	5.75	5.75	5.75
3750	5.75	5.75	6.00
5000		6.00	6.50

Note: The standard tolerance is ± 7.5%

Table 4. Audible Sound Levels

	NEMA® TR-1 Average
Self-Cooled, Two Winding kVA Rating	**Decibels (dB)**
45-500	56
501-700	57
701-1000	58
1001-1500	60
1501-2000	61
2001-2500	62
2501-3000	63
3001-4000	64
4001-5000	65
5001-6000	66
6001-7500	67
7501-10000	68

Table 5. Insulation Test Levels

KV Class	Induced Test 180 or 400 Hz 7200 Cycle	kV BIL Distribution	Applied Test 60 Hz (kV)
1.2	Twice Rated Voltage	30	10
2.5		45	15
5		60	19
8.7		75	26
15		95	34
25		125	40
34.5		150	50

Table 6. Temperature Rise Ratings 0-3300 Feet (0-1000 meters)

	Standard	Optional
Unit Rating (Temperature Rise Winding)	65 °C	55 °C, 55/65 °C, 75 °C
Ambient Temperature Max	40 °C	50 °C
Ambient Temperature 24 Hour Average	30 °C	40 °C
Temperature Rise Hotspot	80 °C	65 °C

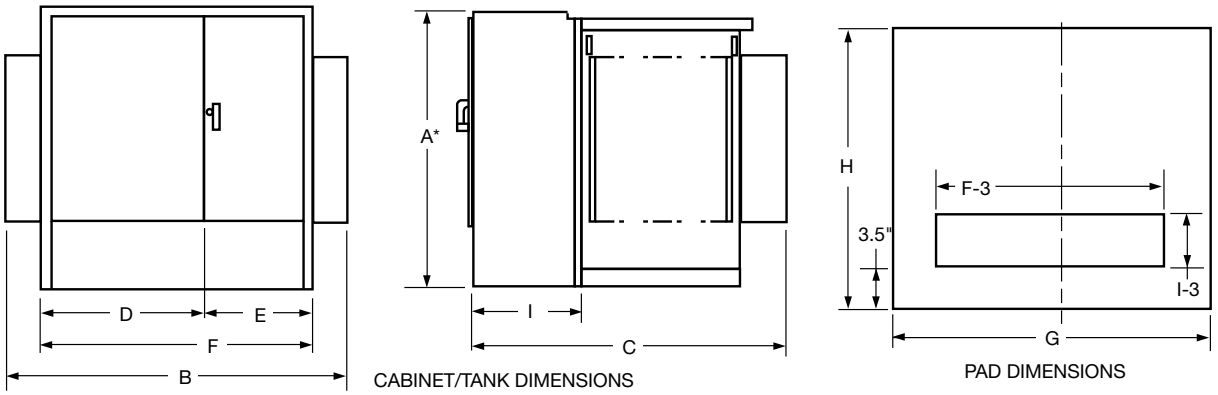


Figure 2. Transformer and pad dimensions.

* Add 9" for Bay-O-Net fusing.

Table 7. Fluid-filled—aluminum windings 55/65 °C Rise[1]

65° Rise	DEAD-FRONT—LOOP OR RADIAL FEED—BAY-O-NET FUSING OIL FILLED—ALUMINUM WINDINGS										
	OUTLINE DIMENSIONS (in.)									Gallons of Fluid	Approx. Total Weight (lbs.)
kVA Rating	A*	B	C	D	E	F	G	H	I		
45	50	68	39	42	26	68	72	43	20	110	2,100
75	50	68	39	42	26	68	72	43	20	115	2,250
112.5	50	68	49	42	26	68	72	53	20	120	2,350
150	50	68	49	42	26	68	72	53	20	125	2,700
225	50	72	51	42	30	72	76	55	20	140	3,150
300	50	72	51	42	30	72	76	55	20	160	3,650
500	50	89	53	42	30	72	93	57	20	190	4,650
750	64	89	57	42	30	72	93	61	20	270	6,500
1000	64	89	59	42	30	72	93	63	20	350	8,200
1500	73	89	86	42	30	72	93	90	24	410	10,300
2000	73	72	87	42	30	72	76	91	24	490	12,500
2500	73	72	99	42	30	72	76	103	24	530	14,500
3000	73	84	99	46	37	84	88	103	24	620	16,700
3750	84	85	108	47	38	85	88	112	24	660	19,300
5000	84	96	108	48	48	96	100	112	24	930	25,000
7500	94	102	122	54	48	102	100	126	24	1,580	41,900

1 Weights, gallons of fluid, and dimensions are for reference only and not for construction. Please contact Eaton for exact dimensions.

* Add 9" for Bay-O-Net fusing.

Table 8. Fluid-Filled—Copper Windings 55/65 °C Rise[1]

65° Rise	DEAD-FRONT—LOOP OR RADIAL FEED—BAY-O-NET FUSING OIL FILLED—COPPER WINDINGS										
	OUTLINE DIMENSIONS (in.)									Gallons of Fluid	Approx. Total Weight (lbs.)
kVA Rating	A*	B	C	D	E	F	G	H	I		
45	50	64	39	34	30	64	69	43	20	110	2,100
75	50	64	39	34	30	64	69	43	20	115	2,350
112.5	50	64	49	34	30	64	69	53	20	115	2,500
150	50	64	49	34	30	64	69	53	20	120	2,700
225	50	64	51	34	30	64	73	55	20	140	3,250
300	50	64	51	34	30	64	75	55	20	160	3,800
500	50	81	53	34	30	64	85	57	20	200	4,800
750	64	89	57	42	30	72	93	61	20	255	6,500
1000	64	89	59	42	30	72	93	63	20	300	7,800
1500	73	89	86	42	30	72	93	90	24	410	10,300
2000	73	72	87	42	30	72	76	91	24	420	11,600
2500	73	72	99	42	30	72	76	103	24	500	14,000
3000	73	84	99	46	37	84	88	103	24	720	18,700
3750	84	85	108	47	38	85	88	112	24	800	20,500
5000	84	96	108	48	48	96	100	112	24	850	25,000
7500	94	102	122	54	48	102	100	126	24	1,620	46,900

[1] Weights, gallons of fluid, and dimensions are for reference only and not for construction. Please contact Eaton for exact dimensions.

* Add 9" for Bay-O-Net fusing.

Standard features

Connections and neutral configurations

- Delta - Wye: Low voltage neutral shall be a fully insulated X0 bushing with removable ground strap.
- Grounded Wye-Wye: High voltage neutral shall be internally tied to the low voltage neutral and brought out as the H0X0 bushing in the secondary compartment with a removable ground strap.
- Delta-Delta: Transformer shall be provided without a neutral bushing.
- Wye-Wye: High voltage neutral shall be brought out as the H0 bushing in the primary compartment and the low voltage neutral shall be brought as the X0- bushing in the secondary compartment.
- Wye-Delta: High voltage neutral shall be brought out as the H0 bushing in the primary compartment. No ground strap shall be provided (line to line rated fusing is required).

High and low voltage bushings

- 200 A bushing wells (15, 25, and 35 kV)
- 200 A, 35 kV Large Interface
- 600 A (15, 25, and 35 kV) Integral bushings (dead-front)
- Electrical-grade wet-process porcelain bushings (live-front)

Tank/cabinet features

- Bolted cover for tank access (45-2500 kVA)
- Welded cover with hand hole (>2500 kVA)
- Three-point latching door for security
- Removable sill for easy installation
- Lifting lugs (4)
- Stainless steel cabinet hinges and mounting studs
- Steel divider between HV and LV compartment
- 20" Deep cabinet (45-1000 kVA)
- 24" Deep cabinet (1500-7500 kVA)
- 30" Deep cabinet (34.5/19.92 kV)
- Pentahead captive bolt
- Stainless steel 1-hole ground pads (45-500 kVA)
- Stainless steel 2-hole ground pads (750-10,000 kVA)
- Parking Stands (dead-front)

Valves/plugs

- One-inch upper filling plug
- One-inch drain plug (45-500 kVA)
- One-inch combination drain valve with sampling device in low voltage compartment (750-10,000 kVA)
- Automatic pressure relief valve

Nameplate

- Laser-scribed anodized aluminum nameplate

Figure 3. Drain valve with sampler.

Figure 4. Automatic Pressure relief valve.

Figure 5. Liquid level gauge.

Figure 6. External Gauges.

Figure 7. External visible break with gauges.

Optional features

High and low voltage bushings

- 200 A (15, 25 kV) bushing inserts
- 200 A (15, 25 kV) feed thru inserts
- 200 A (15, 25 kV) (HTN) bushing wells with removable studs
- High-voltage 600 A (15, 25, 35 kV) deadbreak one-piece bushings
- Low voltage 6-, 8-holes spade
- Low voltage 12-, 16-, 20-holes spade (750-2500 kVA)
- Low voltage bushing supports

Tank/cabinet features

- Stainless steel tank base and cabinet
- Stainless steel tank base, cabinet sides and sill
- 100% stainless steel unit
- Service entrance (2 inch) in sill or cabinet side
- Touch-up paint (domestic)
- Copper ground bus bar
- Kirk-Key provisions
- Nitrogen blanket
- Bus duct cutout

Special designs

- Factory Mutual (FM)
- UL® Classified
- Triplex
- High altitude
- K-Factors
- Step-up
- Critical application
- Modulation transformers
- Seismic applications (including OSHPD)

Switches

- One, two, or three On/Off loadbreak switches
- 4-position loadbreak V-blade switch or T-blade switch
- Delta-wye switch
- 3-position V-Blade selector switch
- 100 A, 150 A, 300 A tap changers
- Dual voltage switch
- Visible break with VFI interrupter interlock
- External visible break (15, 25, and 35 kV, up to 3 MVA)
- External visible break with gauges (15, 25, and 35 kV, up to 3 MVA)

Gauges and devices

- Liquid level gauge (optional contacts)
- Pressure vacuum gauge (optional contacts and bleeder)
- Dial-type thermometer (optional alarm contacts)
- Cover mounted pressure relief device (optional alarm contacts)
- Ground connectors
- Hexhead captive bolt
- Molded case circuit breaker mounting provisions
- External gauges in padlockable box

Overcurrent protection

- Bay-O-Net fusing (Current sensing, dual sensing, dual element, high amperage overload)
- Bay-O-Net expulsion fuse in series with a partial range under-oil ELSP current limiting fuse (below 23 kV)
- Cartridge fusing in series with a partial range under-oil ELSP current limiting fuse (above 23 kV)
- MagneX™ interrupter with ELSP current-limiting fuse
- Vacuum Fault Interrupter (VFI)
- Visible break window
- Fuse/switch interlock

Valves/plugs

- Drain/sampling valve in high-voltage compartment
- Globe type upper fill valve

Overvoltage protection

- Distribution-, intermediate-, or station-class surge arresters
- Elbow arresters (for dead-front connections)

Metering/fan/control

- Full metering package
- Current Transformers (CTs)
- Metering Socket
- NEMA® 4 control box (optional stainless steel)
- NEMA® 7 control box (explosion proof)
- Fan Packages

Testing

- Customer test witness
- Customer final inspection
- Zero Sequence Impedance Test
- Heat Run Test
- ANSI® Impulse Test
- Audible Sound Level Test
- RIV (Corona) Test
- Dissolved Gas Analysis (DGA) Test
- 8- or 24-Hour Leak Test

Coatings (paint)

- ANSI® Bell Green
- ANSI® #61 Light Gray
- ANSI® #70 Sky Gray
- Special paint available per request

Nameplate

- Stainless steel nameplate

Decals and labels

- High voltage warning signs
- Mr. Ouch
- Bi-lingual warning
- DOE compliant
- Customer stock code
- Customer stenciling
- Shock and arc flash warning decal
- Non-PCB decal

BEKAERT

better together

Solar array security fence that's easy to install but hard to get through

Bekaert Solidlock® solar array fence:
maximum security at a lower total cost

Why choose Bekaert?

Expert advice and support

The Bekaert Fence Pros and our experienced dedicated staff are here to help you from the initial inquiry through your installation and beyond.

Your wire transformation and coating specialist

We can provide you the most efficient and cost-effective corrosion prevention methods. From commercial to our proprietary Bezinal®, we have a wide range of corrosion resistant coatings to suit your needs.

Partnering with Bekaert Fencing Solution

Combine Bekaert Fence products with Gripple to better streamline your installation process. Using Gripple products allows for fast and durable bracing, quick and secure splicing, and instant wire termination.

The best perimeter fence performance comes from Bekaert's high tensile fixed knot products.

The manufacturing process and design of our Solidlock® fixed knot products ensure decades-long function with lower initial costs and faster installation than basic chain link. Our products offer significant savings in time, labor and expense during the critical last segment of the solar farm development process.

Benefits: Build better fence with Bekaert

1. Stronger wire with breaking load of up 1,500 lbs
2. Woven fixed knot provides higher integrity and stability in the case of a breach
3. Superior wire coatings extend longevity

Build high quality fencing across all landscapes and terrains

High tensile agricultural-style woven wire fence from Bekaert uses primarily driven posts versus the poured concrete posts required for chain link. This results in the overall project costing less and getting installed faster. With the ability to pull the fence down into dips and up over rises, high tensile conforms better to the landscape, improving performance and aesthetics.

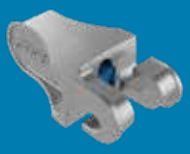
Durable, low-maintenance designs mean long-lasting security and low environmental impacts

With Class 3 or our proprietary zinc-aluminum Bezinal® coating, Bekaert fixed knot woven wire products can withstand the environmental strains of weather and moisture, with a guarantee of 20 years or more on recommended fence designs. The wide range of designs also provides ingress and egress for small predatory animals, helping to maintain ecological balance on solar farm properties while providing perimeter exclusion to large animals and humans.

GRIPPLE PRODUCT/ TOOL RECOMMENDATIONS

Gripple Joiners
Various sizes based on wire gauge

Gripple T-Clips:
For fast wire termination



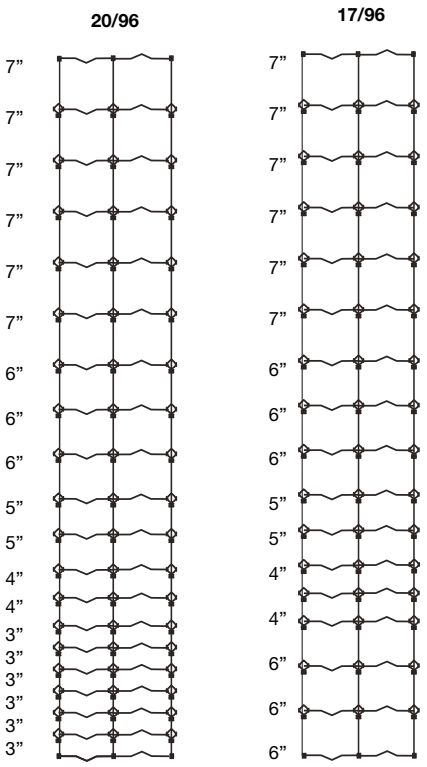
Tools:
- Torq Tensioning Tool
- Contractor Tensioning Tool
- Knippex Wire Cutters

SOLAR FENCE SPECS TABLE

Solidlock® Pro - Professional Strength Fixed Knot with Pre-Installed Gripple Joiners

Part #	Fence Design	Height	Vertical Spacing	Roll Length	Wire Gauge	Roll Weight	Coating
118269	1775-6	75”	6”	330’	12.5 ga	327 lbs	Class 3
260370 (no Gripple Joiner)	1796-6	96”	6”	330’	12.5 ga	355 lbs	Class 3
118288	2096-6	96”	6”	330’	12.5 ga	396 lbs	Class 3
118376	2096-6	96”	6”	500’	12.5 ga	601 lbs	Class 3
646445	1584-6	84”	6”	330’	12.5 ga	311 lbs	Bezinal®
180546	2096-6	96”	6”	330’	12.5 ga	396 lbs	Bezinal®
216657	2096-6	96”	6”	500’	12.5 ga	601 lbs	Bezinal®
657647	1584-6	84”	6”	330’	12.5 ga	311 lbs	Bezinal® + Black
134721	1796-6	96”	6”	330’	12.5 ga	355 lbs	Bezinal® + Black
136261	2096-6	96”	6”	330’	12.5 ga	396 lbs	Bezinal® + Black

Solidlock® Pro Fixed Knot Solar - 12.5 gauge



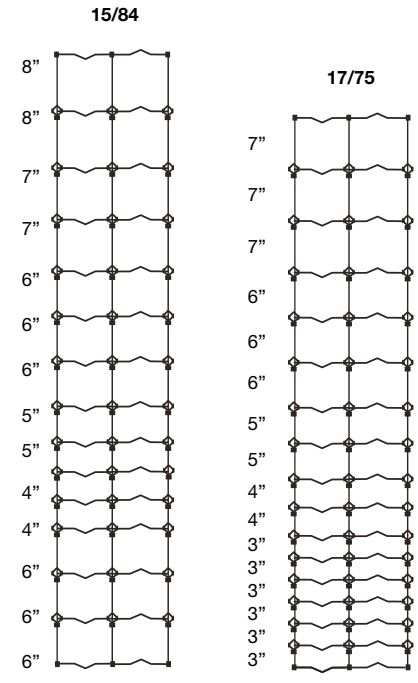
TOPPER WIRE RECOMMENDATIONS

Cattleman® Pro - Professional Strength Barbed Wire

Part #	Fence Design	Barb Spacing	Barb Type	Wire Diameter	Reel Length	Reel Weight	Coating
135137	2 point	5”	flat	14 ga	1320’	56 lbs	Class 3
134936	4 point	5”	flat	14 ga	1320’	65 lbs	Class 3
145733	2 point	5”	flat	14 ga	1320’	56 lbs	Bezinal®
145734	4 point	5”	flat	14 ga	1320’	65 lbs	Bezinal®

Gaucho® High Strength Barbed Wire

Part #	Fence Design	Barb Spacing	Barb Type	Wire Diameter	Reel Length	Reel Weight	Coating
118290	2 point	5”	flat	15.5 ga	1320’	40 lbs	Class 3
118293	4 point	5”	round	15.5 ga	1320’	41 lbs	Class 3
118352	4 point	3”	round	15.5 ga	1320’	48 lbs	Class 3
261131	4 point	5”	round	15.5 ga	1320’	41 lbs	Bezinal®



When we offer our clients a cost comparison on chain link versus high tensile woven wire from Bekaert, the savings in product cost and labor requirements make high tensile a clear choice. Add to that the ability to install high tensile quickly in a variety of soil and terrain conditions, and it can provide solar development companies a fast finish to their solar farm project. If our high tensile fence install can shave 4 or 5 days off the end of a development build and get the project online faster, that's very valuable.

Bob Almeida, partner-owner, homestead fence company

The right wire for your application

Bekaert fixed knot products are ideal for a variety of solar field specifications. The Bekaert Fence Pro's extensive product and installation knowledge will ensure you'll find the product best suited to your terrain, environmental and performance needs, and installation requirements.

Strength

Bekaert's Solidlock® Pro 12.5 gauge fixed knot perimeter fence products deter vandals with a breaking strength of up to 1,500 lbs.

Durability

The high-tensile woven construction of Bekaert's fence products protects the fence's integrity and keeps it standing, even if wires are cut.

Longevity

Protect the longevity of your perimeter fence by choosing a Class 3 galvanized coating with a 20 year guarantee. For additional protection and longevity, choose a product with our proprietary Bezinal® coating with a 30 year guarantee or Bezinal®+ Black with a 40 year guarantee.

Flexibility

The strength of Bekaert's high-tensile fence products makes it ideal for varied terrain and rural installations. It also allows for wider spaces between posts, reducing installation time and long-term maintenance costs.

Bekaert's high tensile woven wire products provide perimeter security to solar farms with faster installation times, lower total install cost and a stronger barrier compared to traditional chain link products. Bekaert's high tensile wire excludes people and large animals while allowing beneficial small animals through, helping control pests and decrease the fence's environmental impact.

More information?

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TYPICAL SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER DETAILS

NOTES:

1. NUMBER OF STAPLES/SCREWS USED WILL VARY BASED ON BARRIER HEIGHT.
2. FIRE QUENCH YARDSTONE – AREA EXTENT AND DEPTH AS PER ENGINEER.

SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER PLAN

SCALE: N.T.S.

DWG FILE: DETAILS - PLAN
DATE: MARCH 9, 2011
DRAWN BY: M.T.H.
SCALE: N.T.S.

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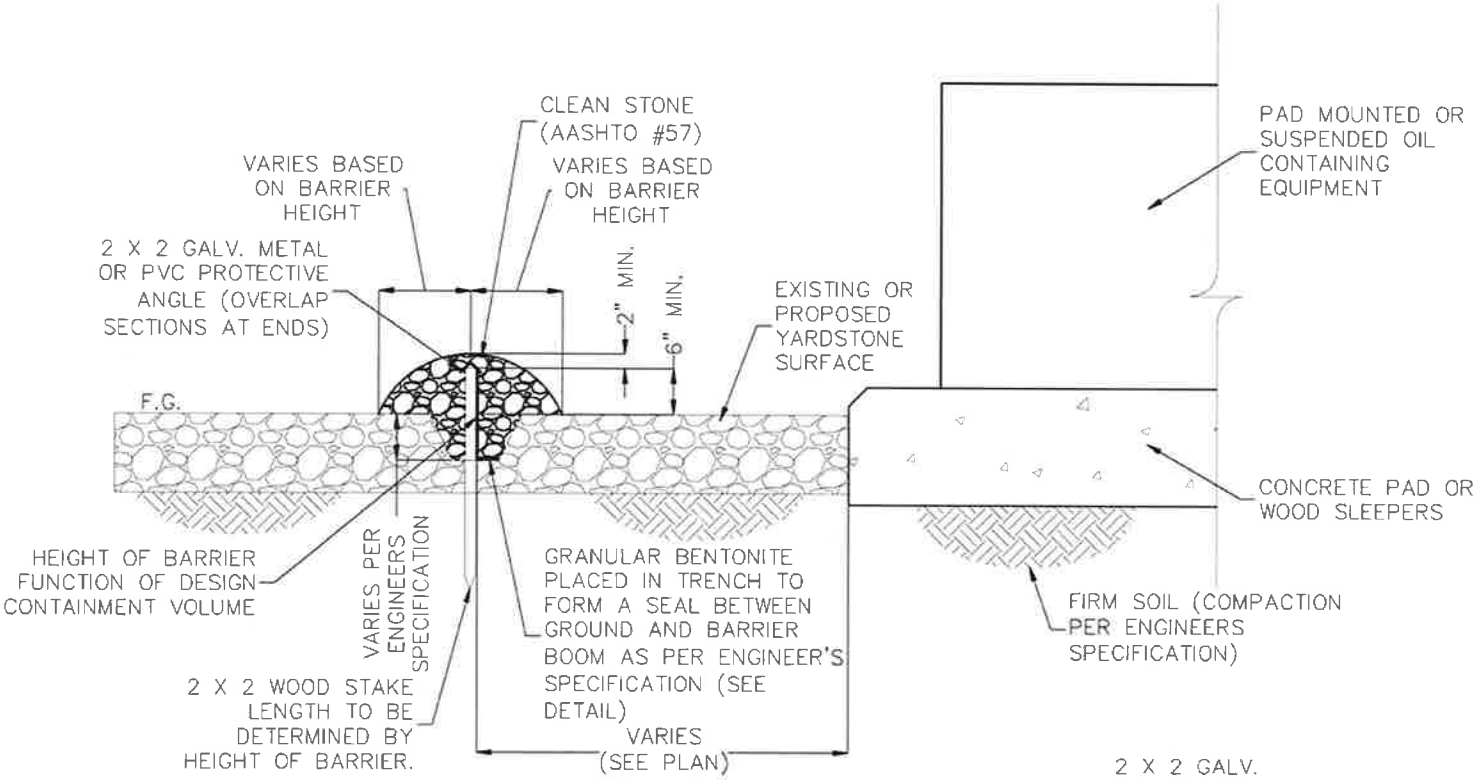
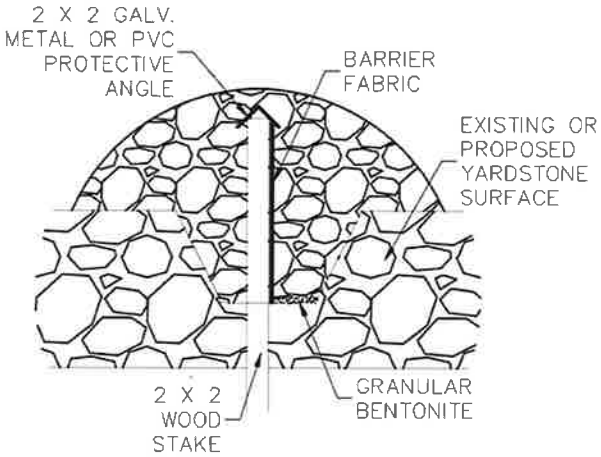
TYPICAL SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER DETAILS



NOTES:

1. INSTALL BARRIER IN TRENCH – DEPTH AND WIDTH AS PER ENGINEER'S SPECIFICATION.
2. SEE PLAN FOR LOCATION OF BARRIER IN RELATION TO OIL CONTAINING EQUIPMENT.
3. FOR CONTAINMENT LAYOUTS THAT DO NOT TOTALLY ENCLOSE THE OIL CONTAINING EQUIPMENT – EXTEND BOTH ENDS OF THE BARRIER AT LEAST 5' UPSLOPE AT A 45° ANGLE TO THE MAIN BARRIER ALIGNMENT OR AS SHOWN ON THE PLAN.
4. (OPTIONAL) LAY PROTECTIVE ANGLE ON WOOD STAKES BEFORE INSTALLING STONE ADJACENT TO AND COVERING BARRIER.
5. BARRIER TO BE INSTALLED WITH THE BLACK (AGENT X) SIDE FACING INSIDE. FLAP, IF USED, ALSO TO FACE INSIDE.
6. OVERLAP ENDS OF BARRIER PIECE A MINIMUM OF 2" AND STAPLE/SCREW TO WOOD STAKE.
7. DO NOT CUT OR TRIM BARRIER WITHOUT MANUFACTURE/REPRESENTATIVE APPROVAL.



BARRIER DETAIL

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SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER SECTION

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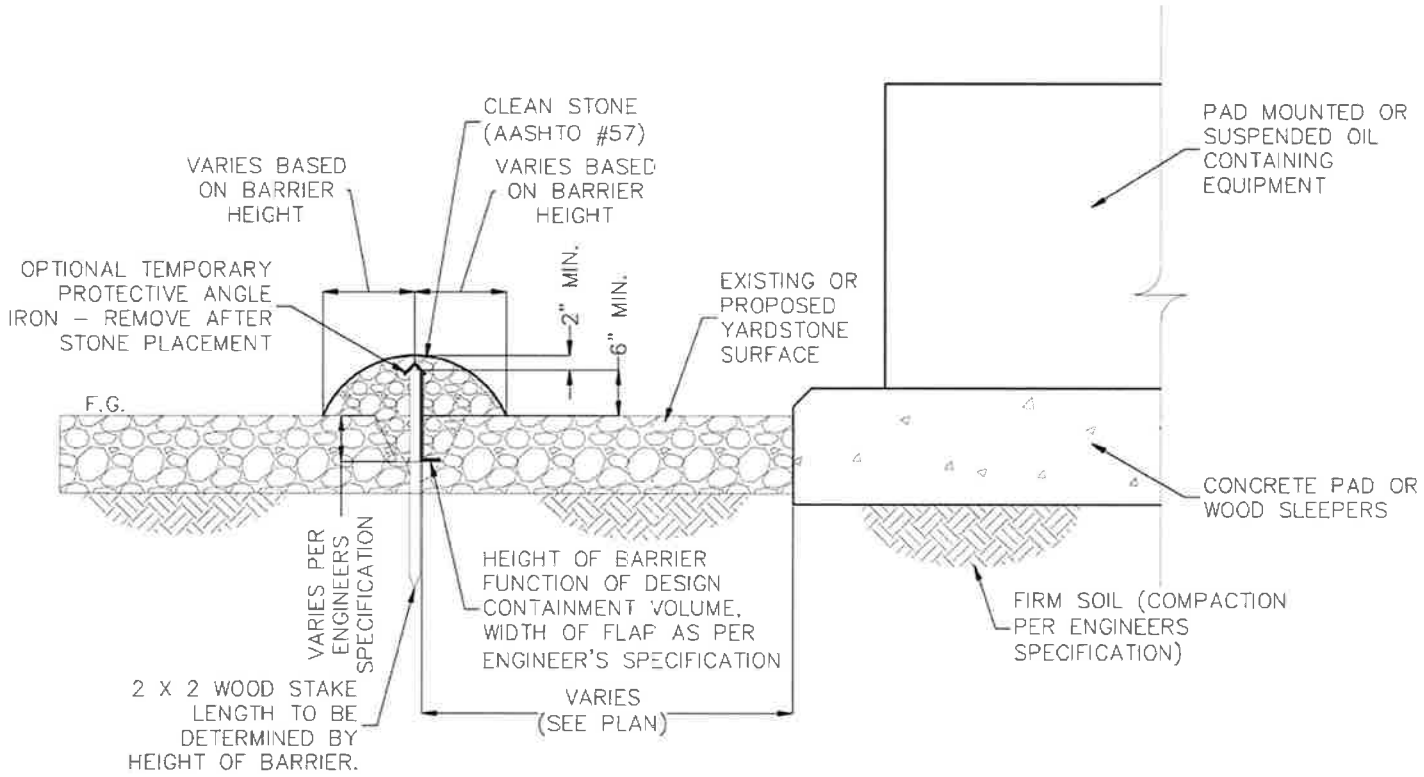
TYPICAL SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER DETAILS



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7. DO NOT CUT OR TRIM BARRIER WITHOJT MANUFACTURE/REPRESENTATIVE APPROVAL.

SECONDARY CONTAINMENT GEOSYNTHETIC BARRIER SECTION (with subsurface flow prevention flap)

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