

The Fully Integrated – Certified Solar Proposal!

Warranty **5 years**

Technical Specification

Selective Collector & Vacuum



Green Line

Green Line Strip Collector

Selective absorber made from aluminum strip sheet for higher in low temperatures.

Frame from painted aluminum for high resistance to corrosion (wet climates, coastal areas).

Back from galvanized sheet metal for high corrosion resistance (humid climates, coastal areas).

Insulation of the collector made of **30 mm thick rock wool** on the back and **15mm thick on the sides** for higher performance at low temperatures.

Vertical copper pipes (risers) Ø10 x 0.4 mm

Horizontal copper pipes (headers) Ø22 x 0.7 mm

Collector's glazing made of 4mm prismatic security glass (securit), mistlite solar, with high transmittance and low reflectivity.



Dimensions – Weights – Collectors Surface			
Height	Width	Weight	Surface
(m)	(m)	(kg)	(m ²)
0,95	1,25	24	1,25
1,50	1,00	27	1,5
2,00	1,00	36,5	2
2,00	1,25	41	2,5

Technical Specifications Green Line Strip

Green Line Collector			
	1,5 m ²	2,0 m ²	2,5 m ²
Dimensions (Length x Width x Height)mm	1501x1007x87	2006x1007x87	2008x1258x87
Aperture area (m²)	1,35	1,83	2,31
Absorber area (m²)	1,34	1,81	2,30
Absorber	Selective aluminum	Selective aluminum	Selective aluminum
Absorbance	0,95±0,01	0,95±0,01	0,95±0,01
Emittance	0,05±0,02	0,05±0,02	0,05±0,02
Coating	Titanium oxides	Titanium oxides	Titanium oxides
Material, Width Side insulation	15 mm Rock Wool	15 mm Rock Wool	15 mm Rock Wool
Material, Width Back insulation	30 mm Rock Wool	30 mm Rock Wool	30 mm Rock Wool
Soldering Absorber – Copper pipes	Laser	Laser	Laser
Weight (kg)	27	36,5	41
Min inclination (o)	25	25	25
Max inclination (o)	90	90	90
Total water volume collector (lt)	1,3	1,6	1,9
Operation pressure (bar)	6	6	6
Testing pressure (bar)	10	10	10
Horizontal piping diameter	Ø22	Ø22	Ø22
Vertical piping diameter	Ø10	Ø10	Ø10
Number of Vertical pipes	8	8	11
Piping material	Copper	Copper	Copper
Impermeability	Silicone	Silicone	Silicone
Cover material	Securit Mistlite Solar Glass	Securit Mistlite Solar Glass	Securit Mistlite Solar Glass

Safety and Reliability with evidences

The Green Line collectors are certified by the most reliable and internationally recognized certificate, the solar keymark.

Warranty 5 years



SOLAR KEYMARK

Green Line Full Face Collector

Selective absorber Full Face (absorbance $\alpha = 0,94$) for greater efficiency in winter.

Anodized aluminum frame and back plate for high corrosion resistance for installations in humid climates or near the sea (coastal areas and islands).

Insulation of the collector made of expanded polyurethane and further compressed at a temperature to achieve uniform **density πυκνότητα (52 kg/m²)** throughout the length and width.

Insulation thickness of 30 mm on the back and 15mm on the sides for higher performance at low temperatures (more hot water during winter).

Copper pipes $\varnothing 10 \times 0,4$ mm

Headers $\varnothing 22 \times 0,7$ mm

Sealed with black silicone IG type and double adhesive tape.

Collector's glazing made of 4 mm prismatic security glass (security), mistlite solar, with high transmittance and low reflectivity.



Dimensions - Weights – Collector's Surface			
Height	Width	Weight	Surface
(m)	(m)	(kg)	(m ²)
1,6	1,30	40	2,0
1,7	1,30	42	2,2
2,00	1,29	47	2,55

Technical Specifications Green Line Full Face

Green Line Full Face Collector			
	2,0 m ²	2,2 m ²	2,55 m ²
Dimensions (Length x Width x Height) mm	1605x1300x87	1705x1295x87	1985x1285x87
Aperture are (m²)	1,82	2,03	2,36
Absorber area (m²)	1,81	2,01	2,31
Absorber	Selective aluminum single surface	Selective aluminum single surface	Selective aluminum single surface
Absorbance	0,95±0,01	0,95±0,01	0,95±0,01
Emmitance	0,05±0,02	0,05±0,02	0,05±0,02
Coating	Titanium oxides	Titanium oxides	Titanium oxides
Material, Width Side insulation	15 mm Compressed Polyurethane (52kg/m ³)	15 mm Compressed Polyurethane (52kg/m ³)	15 mm Compressed Polyurethane (52kg/m ³)
Material, Width Back insulation	30 mm Compressed Polyurethane (52kg/m ³)	30 mm Compressed Polyurethane (52kg/m ³)	30 mm Compressed Polyurethane (52kg/m ³)
Soldering Absorber – Copper pipes	Laser	Laser	Laser
Weight (kg)	40	42	47
Min inclination (o)	25	25	25
Max inclination (o)	90	90	90
Total water volume of collector (lt)	1,8	1,9	2,0
Operation pressure (bar)	6	6	6
Testing pressure (bar)	10	10	10
Horizontal piping diameter	Ø22	Ø22	Ø22
Vertical piping diameter	Ø10	Ø10	Ø10
Number of pipes	11	11	11
Piping material	Copper	Copper	Copper
Impermeability	Silicone & Double Adhesive tape	Silicone & Double Adhesive tape	Silicone & Double Adhesive tape
Cover material	Low Iron Securit Mistlite Solar Glass	Low Iron Securit Mistlite Solar Glass	Low Iron Securit Mistlite Solar Glass

Safety and Reliability with evidences

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Warranty 5 years



SOLAR KEYMARK

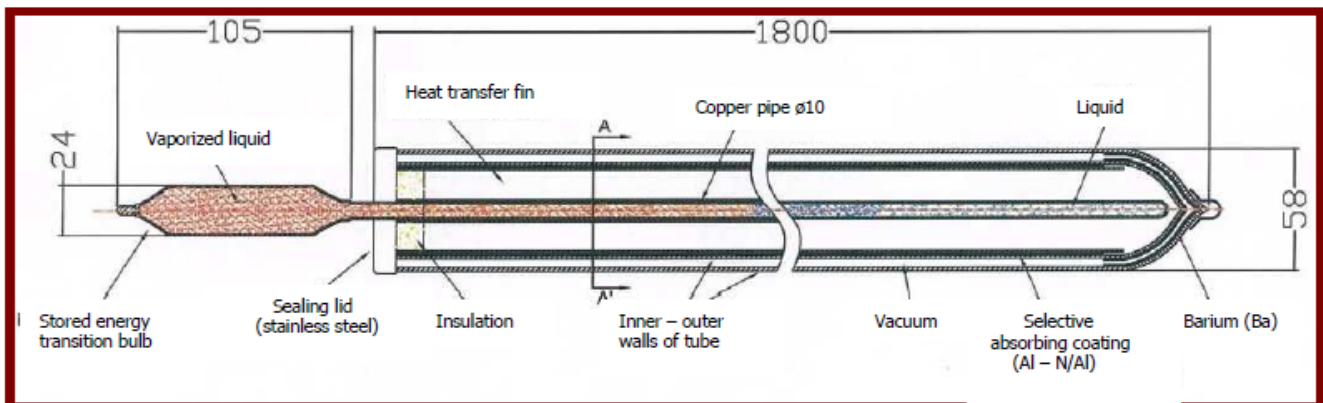
Green Line Plus Vacuum Tube

Made of borosilicate glass 1,6 mm thick.

Coating of selective solar absorber made of Aluminum nitride.

The component of the absorber consists of double coated glass tube.

Due to special geometry (shape) of the absorber, maximal absorption of solar energy is achieved.



Vacuum Tube	
Length of Vacuum tube (Length of absorber)	1800 mm (1720 mm)
Inner / outer vacuum diameter	58 / 47 mm
Glass thickness	1,6 mm
Material	Borosilicate glass 3,3
Absorbance coating	Graded Al-N/Al
Absorbance	$\geq 93,5\%$ (IAM 1,5)
Emittance	$\leq 6,5\%$ (80°C)
Vacuum	$P < 3 \times 10^{-3}$ Pa
Stagnation Temperature	231°C
Max efficiency (for 20/15 vacuum tubes) $T_m - T_a = 0K \text{ \& } 1000W/m^2$	1383 W / 826 W

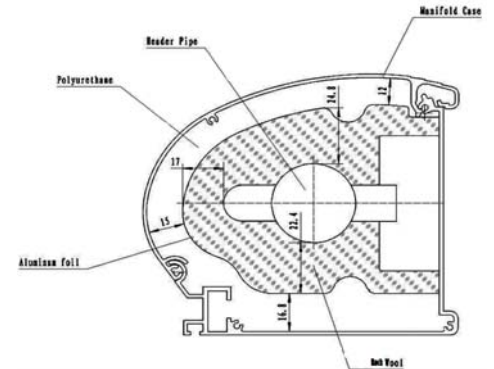
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Technical Specifications Green Line Plus



Collector	
Material	Aluminum
Insulation	Rock Wool and Polyurethane
Connection diameter	3/4" or 1"
Piping material	Copper

Vacuum Collector			
Collector	15 Vacuum Tubes	20 Vacuum Tubes	
Dimensions (Length (with copper piping) x Width x Height) [mm]	1275 x 1953 x 145	1650 x 1953 x 145	
Aperture area [m ²]	1,52	2,03	
Absorber area [m ²]	1,22	1,63	
Max. Operating pressure [bar]	7	7	
Spacing between vacuum tubes [mm]	80	80	
Nominal pressure [bar]	6	6	
Gross dry weight [kg]	53	70	
Min flow rate [L/h]	90	120	
Max flow rate [L/h]	180	240	
Fluid capacity [L]	0,96	1,27	
Stagnation temperate [° C]	231	231	
Pressure drop (Pa) at temperature Tm=20 °C, for various flows	Flow (L/h)	Pressure drop (Pa)	Pressure drop (Pa)
	0	0	0
	50	14	19
	100	53	71
	150	116	155
	200	203	271
250	313	420	
n0 (-)	0,681		
a1 (W/m ² K)	1,6		
a2 (W/m ² K ²)	0,006		
Tm-Ta 10K - 1000W (W)	1011	1348	
Tm-Ta 30K - 1000W (W)	956	1275	
Tm-Ta 50K - 1000W (W)	893	1190	

ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ
DECLARATION OF CONFORMITY

CE

ΕΝΤΟΛΟΔΟΧΟΣ/ AUTHORIZED REPRESENTATIVE
(Εγκατεστημένος στην Ε.Κ/established in the E.C.)

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INTERPLAST A.E.

ΔΙΕΥΘΥΝΣΗ/ADDRESS

10ο χλμ. Ε.Ο. ΘΕΣΣ/ΝΙΚΗΣ - ΚΑΤΕΡΙΝΗΣ

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΔΗΛΩΝΕΙ ΟΤΙ: / HEREWITH DECLARES THAT:
ΠΕΡΙΓΡΑΦΗ ΠΡΟΙΟΝΤΟΣ / PRODUCT DESCRIPTION

ΗΛΙΑΚΟΥ ΣΥΛΛΕΚΤΗ - COLLECTOR

ΤΥΠΟΣ/TYPE	ΜΑΡΚΑ/ BRAND NAME
1.25m ² Strip	1.25m ² Green Line
1.50m ² Strip	1.50m ² Green Line
2.00m ² Strip	2.00m ² Green Line
2.50m ² Strip	2.50m ² Green Line
2.00m ² Full Face	2.00m ² Green Line Plus
2.20m ² Full Face	2.20m ² Green Line Plus
2.55m ² Full Face	2.55m ² Green Line Plus

ΕΙΝΑΙ ΣΥΜΦΩΝΟ ΜΕ ΤΙΣ ΔΙΑΤΑΞΕΙΣ ΟΔΗΓΙΩΝ/ IS IN CONFORMITY WITH PROVISIONS OF DIRECTIVES

73/23/ΕΟΚ

93/68/ΕΟΚ

ΠΡΟΤΥΠΑ ΕΦΑΡΜΟΖΟΜΕΝΑ ΑΠΟ ΤΟΝ ΚΑΤΑΣΚΕΥΑΣΤΗ/ IS IN CONFORMITY WITH PROVISIONS OF DIRECTIVES

Εναρμονισμένα/harmonize
Διεθνή/ international
Εθνικά/ national

EN12975-1	EN12975-2	
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ΕΤΟΣ ΠΟΥ ΤΕΘΗΚΕ Η ΣΗΜΑΝΣΗ CE/ YEAR IN WHICH CE MARKING WAS AFFIXED

2002

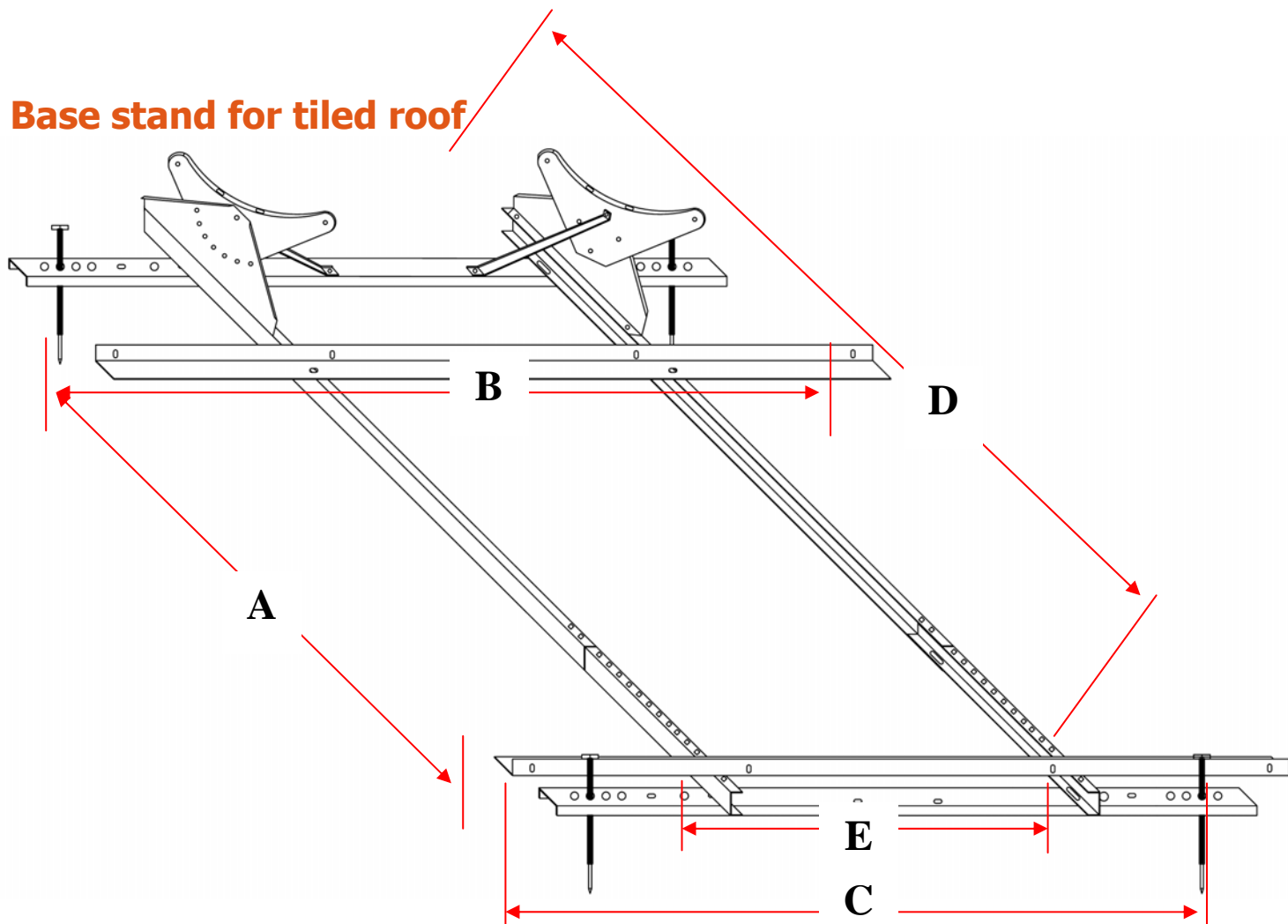
ΣΤΟΙΧΕΙΑ ΤΟΥ ΕΞΟΥΣΙΟΔΟΤΗΜΕΝΟΥ ΑΠΟ ΤΟΝ ΚΑΤΑΣΚΕΥΑΣΤΗ ΝΑ ΥΠΟΓΡΑΦΕΙ ΤΗΝ ΔΗΛΩΣΗ
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ΟΝΟΜΑ /NAME

SIGNATURE AND MANUFACTURERS SEAL

	INTERPLAST A.E. Αρ. Μ.Α.Ε.: 89808/62/Β/98/37 ΑΦΜ: 094526799 ΔΟΥ: ΦΑΕ ΘΕΣΣ/ΝΙΚΗΣ ΤΗΛ. 2310 795371 (5 ΓΡ.) FAX: 2310 795373
ΔΙΕΥΘΥΝΣΗ/ ADDRESS	
ΤΟΠΟΣ ΚΑΙ ΗΜΕΡΟΜΗΝΙΑ /PLACE AND DATE	
ΘΕΣΣΑΛΟΝΙΚΗ, 07/05/2012	

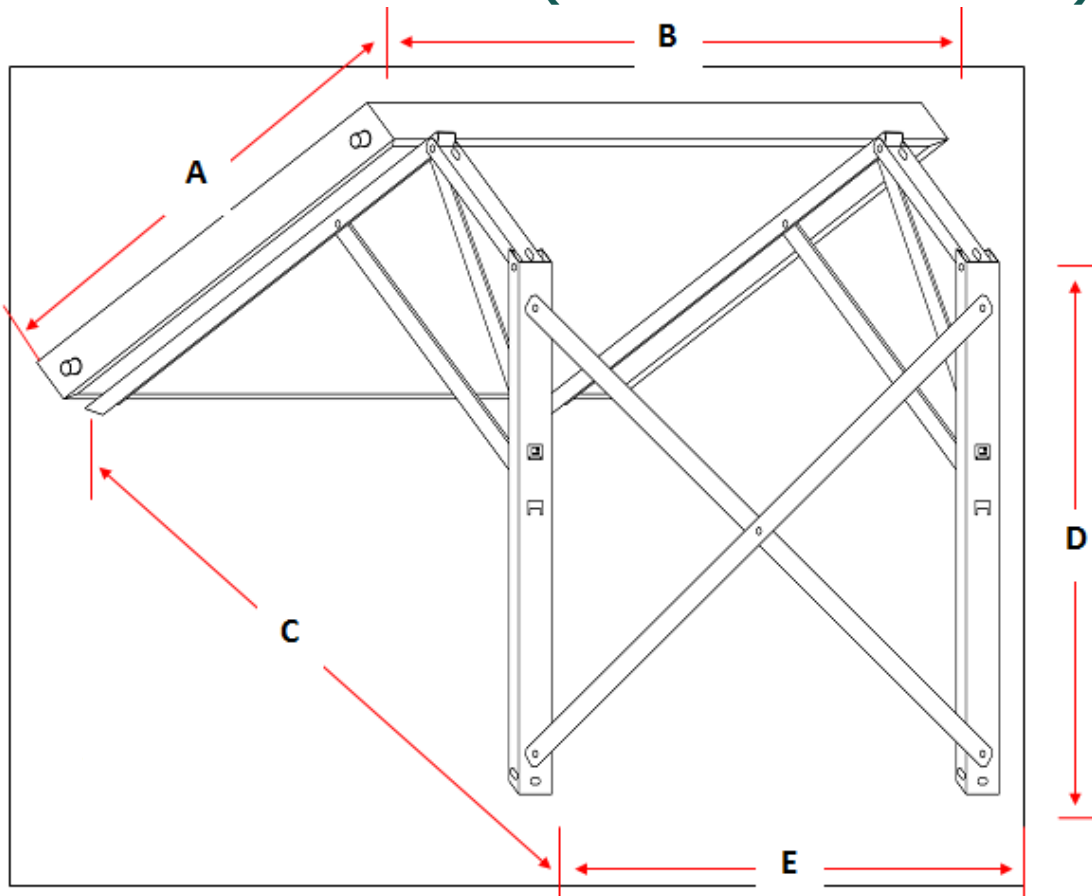
Base stand for tiled roof



Dimensions of base stand for tiled roof						
TANK VOLUME (L)	COLLECTOR SURFACE (m ²)	A	B	C	D	E
		COLLECTOR HEIGHT (m)	COLLECTOR WIDTH (m)	BASE WIDTH (m)	BASE HEIGHT (m)	DISTANCE OF SIDE STANDS (m)
120	1,5	1,5	1,0	1,5	2,0	0,94
170	2,0	1,6	1,3	1,5	2,5	0,94
300	2 x 2,0=4,0	1,6	1,3	1,5	2,5	0,94
200	2,2	1,7	1,3	1,5	2,5	0,94
150	2,0	2,0	1,0	1,5	2,5	0,94
170	2,0	2,0	1,0	1,5	2,5	0,94
200	2,0	2,0	1,0	1,5	2,5	0,94
300	2 x 2,0=4,0	2,0	1,0	1,5	2,5	0,94
270	2,5	2,0	1,25	1,5	2,5	0,94
200	2,55	2,0	1,29	1,5	2,5	0,94
270	2,55	2,0	1,29	1,5	2,5	0,94

Comments: a) If we have 2 collectors, then we multiply the **B** factor and add ca. **0.1m** due to the connection required for the 2 collectors.

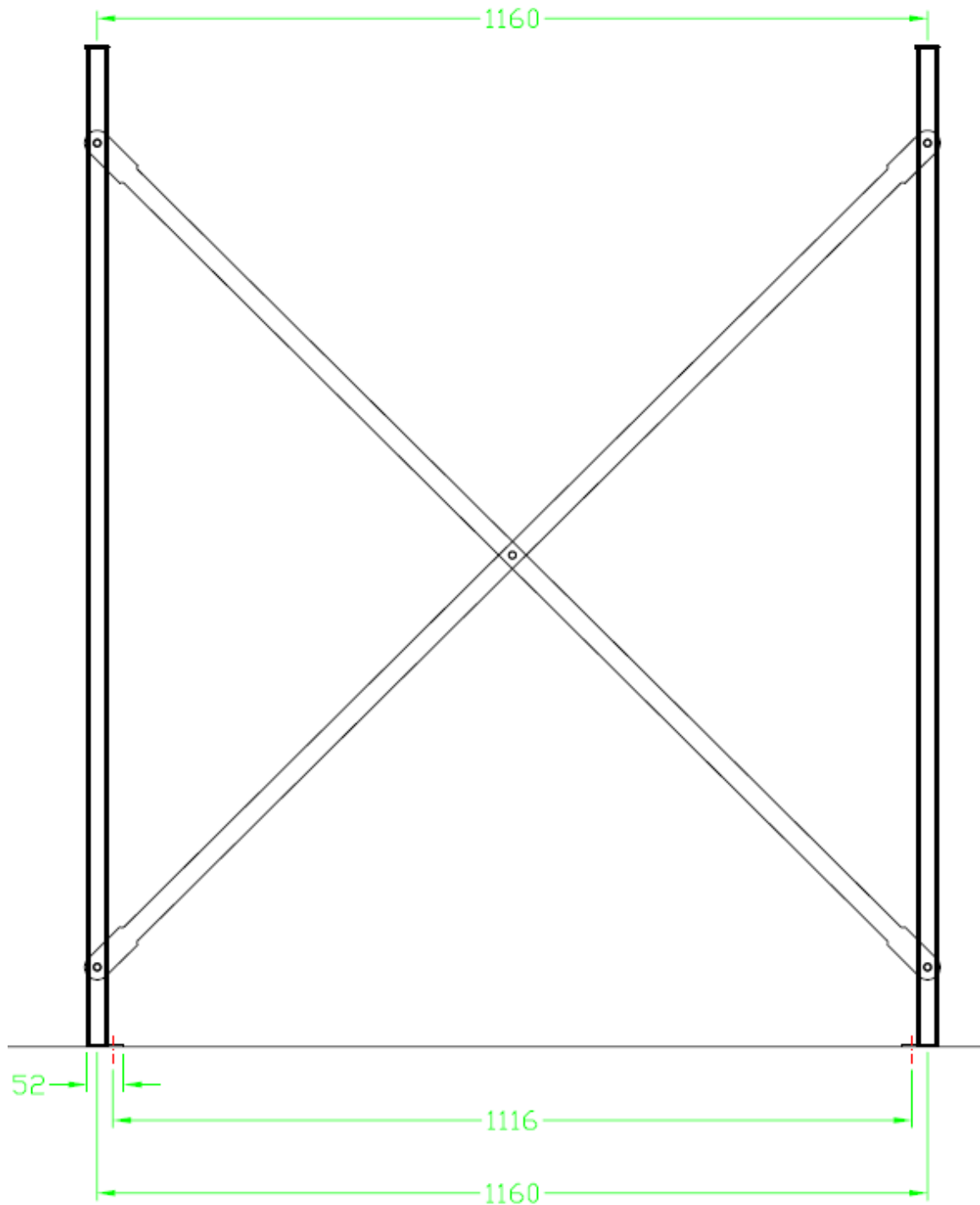
Automatic Terrace base stand (Patent No. 2011011633)

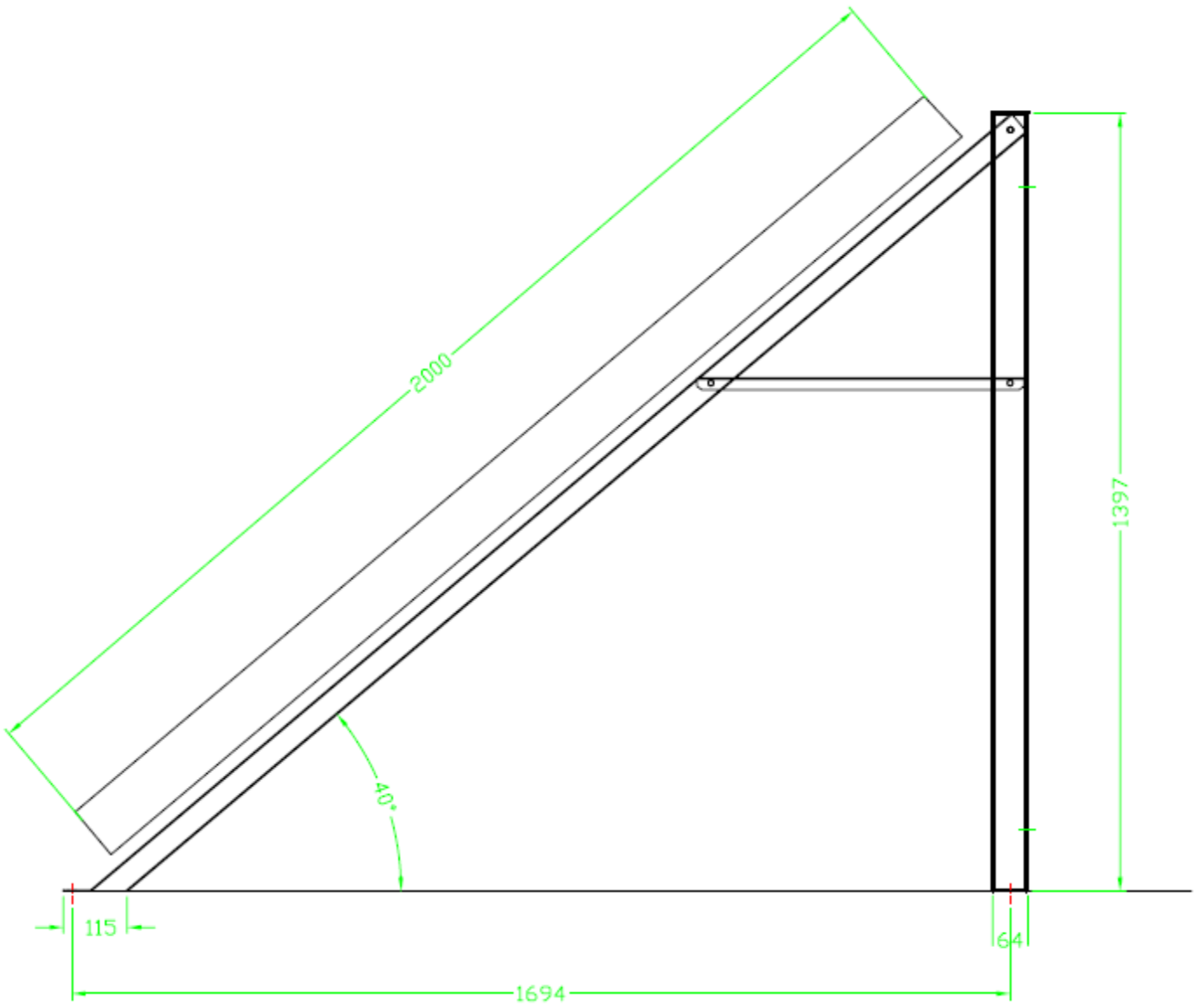


Dimensions of automatic base stand						
TANK VOLUME (L)	COLLECTOR SURFACE (m ²)	A COLLECTOR HEIGHT (m)	B COLLECTOR WIDTH (m)	C BASE WIDTH (m)	D BASE HEIGHT (m)	E DISTANCE OF SIDE STANDS (m)
80	1,2	0,95	1,2	0,98	0,82	0,76
80	1,5	1,5	1,0	1,55	1,15	0,76
120	1,5	1,5	1,0	1,55	1,15	0,94
170	2,0	1,6	1,3	1,62	1,22	0,94
300	2 x 2,0=4,0	1,6	1,3	1,62	1,22	0,94
200	2,2	1,7	1,3	1,69	1,29	0,94
150	2,0	2,0	1,0	1,9	1,5	0,94
170	2,0	2,0	1,0	1,9	1,5	0,94
200	2,0	2,0	1,0	1,9	1,5	0,94
300	2 x 2,0=4,0	2,0	1,0	1,9	1,5	0,94
270	2,5	2,0	1,25	1,9	1,5	0,94
200	2,55	2,0	1,29	1,9	1,5	0,94
270	2,55	2,0	1,29	1,9	1,5	0,94

Comments: a) If we have 2 collectors, then we multiply the **B** factor and add ca. **0.1m** due to the connection required for the 2 collectors, (b) to calculate the bore holes for the screws in the terrace we add to distance **C** **0.04m**.

Simple terrace base stand





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