

ET³SIANGREEN

The Arun - Flat Roof



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data sheet



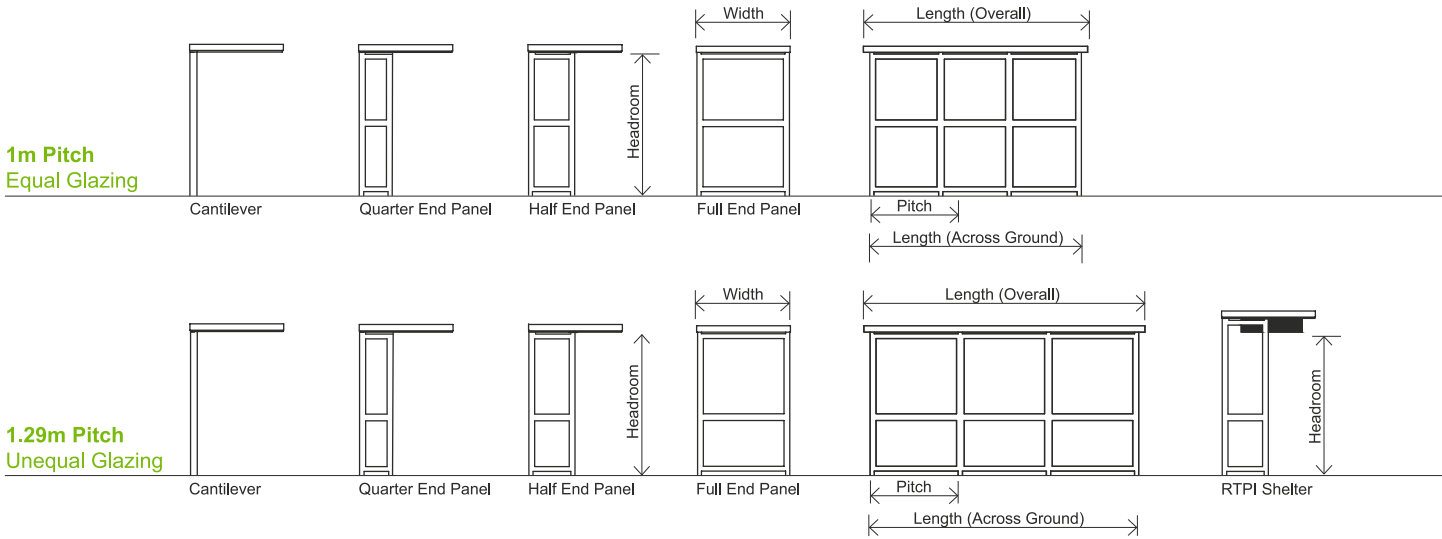
The flat roof Arun incorporates many of the features found throughout the Shelter Solutions ranges, including a safety mid-rail, making it an attractive, high quality vandal resistant shelter with a very clean and contemporary design.

Configurations for the bus shelter include both cantilever and enclosed designs for improved protection from the elements.

The flat roof Arun is designed around a steel frame, which can also be manufactured from stainless steel for a more premium look. The steel sandwich roof is edged with an aluminium extrusion for added strength. The glazing system utilised is secure and unobtrusive, yet easily accessible for maintenance. The glazing system can accept a variety of materials from toughened glass to solid painted galvanised panels.

The standard flat roof Arun bus shelter is available in 1290mm pitch bays, with a roof width of 1375mm.

Other sizes are available on request.



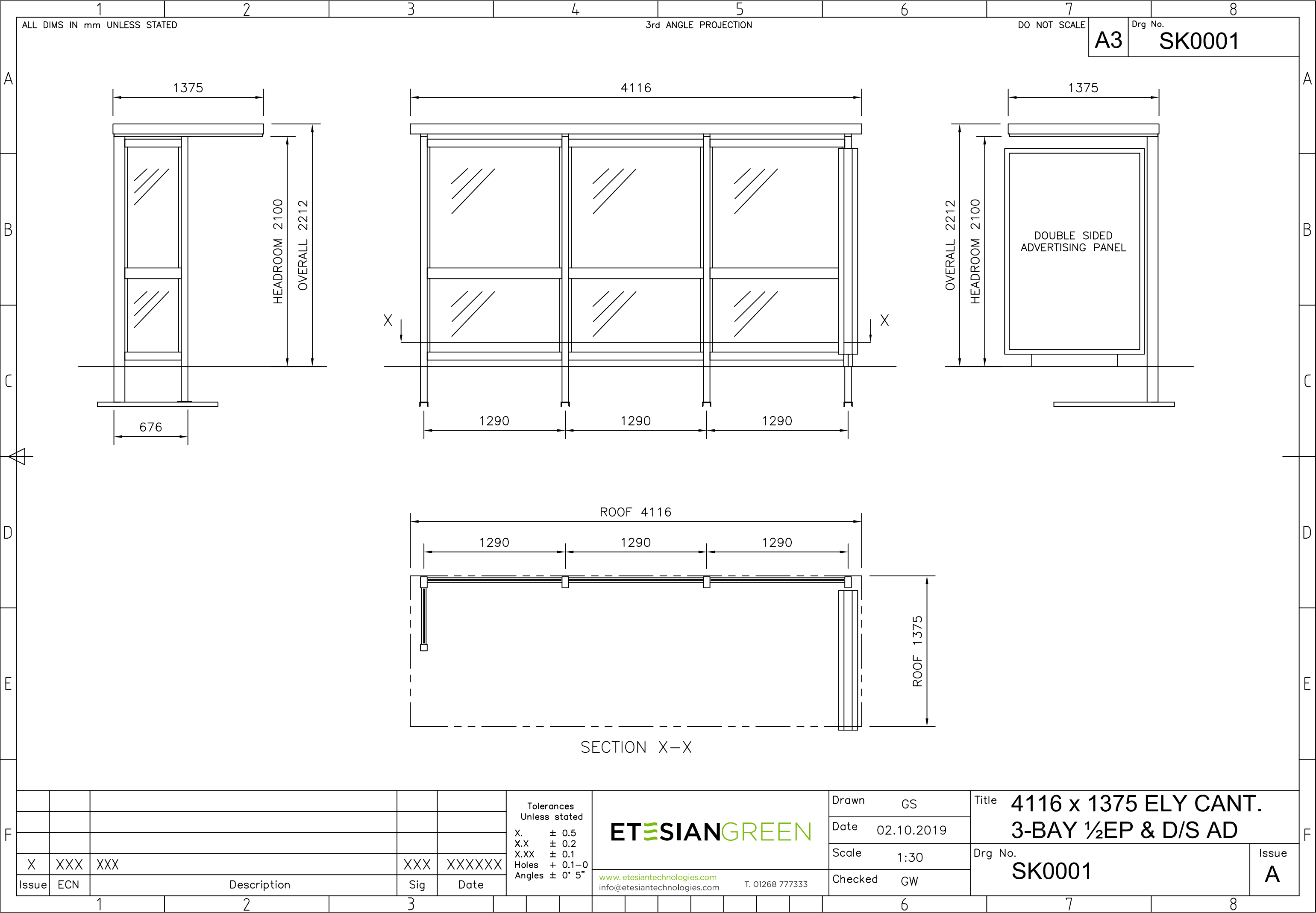
Cantilever	Enclosed	Width	Pitch	Length				Cantilever End Panels	Headroom
				Across Ground		Overall			
				2 Bay	3 Bay	2 Bay	3 Bay		
●	●	1375mm	1000mm	2060mm	3060mm	2250mm	3250mm	QEP HEP FEP	2100mm
			1290mm	2640mm	3930mm	2830mm	4120mm		

SPECIFICATION

Frame:	Steel - zinc protected square section (60mm square)
Finish:	Powder coated to any standard RAL colour
Roof Shape:	Flat
Standard Headroom:	2100mm
Glazing System:	Glazing System: Extruded aluminium with mid rail
Side & End Glazing:	6mm UV protected clear polycarbonate, or 8mm toughened glass, or Solid panels (powder coated finish),or Mesh panels (powder coated finish)
Roof:	Steel sandwich roof with aluminium surround
Ground Fixing:	Ground Fixing: Dig in or Bolt down
Fixings:	Stainless steel
Configurations:	Enclosed Cantilever No end panel NEP Quarter end panel QEP Half end panel HEP Full end panel FEP

OPTIONS




Seating:	Aluminium perch (with or without handles) GRP pad (with or without handles) Wooden perch
Lighting:	LED solar powered
RTPI:	Fully compatible
Timetable Cases:	A4, AA4, AAA4 or DRU (Double Royal)
Bus Stop Flag Brackets:	Fully compatible
Signage:	Vinyl or screen printed graphics





1

1

1.375m(W) x 1.29m(P) CANTILEVER FLAT ROOF ARUN																																																																																																																														
SHELTER TYPE	SHELTER NAME	RTI	HEADROOM	OVERALL HEIGHT	ROOF LENGTH						LENGTH ACROSS GROUND																																																																																																																			
					2 BAY		3 BAY		4 BAY		2 BAY		3 BAY		4 BAY																																																																																																															
1	STANDARD HEIGHT	NO	2100mm	2212mm	2830mm		4116mm		5410mm		2640mm		3930mm		5220mm																																																																																																															
2	RTI HEIGHT	YES	2100mm	2510mm																																																																																																																										
3	EXTENDED RTI HEIGHT	YES	2300mm	2710mm																																																																																																																										
<table><tr><td></td><td></td><td colspan="10"></td><td></td><td></td><td rowspan="5">Tolerances Unless stated X. ± 0.5 X.X ± 0.2 X.XX ± 0.1 Holes + 0.1–0 Angles ± 0' 5"</td><td colspan="4" rowspan="5"> www.etesiantechologies.com T. 01268 777333 info@etesiantechologies.com</td><td colspan="2">Drawn GS</td><td colspan="6" rowspan="3">Title 1.375m (W) x 1.29m (P) ARUN FLAT ROOF</td></tr><tr><td></td><td></td><td colspan="10"></td><td></td><td></td><td colspan="2">Date 26–01–2020</td></tr><tr><td></td><td></td><td colspan="10"></td><td></td><td></td><td colspan="2">Scale 1:30</td></tr><tr><td>X</td><td>XXX</td><td colspan="10">XXX</td><td>XXX</td><td>XXXXXX</td><td colspan="2">Drg No.</td><td colspan="6" rowspan="2">SK2905 PAGE 2 of 2</td><td colspan="2" rowspan="2">Issue 1</td></tr><tr><td>Issue</td><td>ECN</td><td colspan="10">Description</td><td>Sig</td><td>Date</td></tr></table>																																												Tolerances Unless stated X. ± 0.5 X.X ± 0.2 X.XX ± 0.1 Holes + 0.1–0 Angles ± 0' 5"	 www.etesiantechologies.com T. 01268 777333 info@etesiantechologies.com				Drawn GS		Title 1.375m (W) x 1.29m (P) ARUN FLAT ROOF																				Date 26–01–2020																Scale 1:30		X	XXX	XXX										XXX	XXXXXX	Drg No.		SK2905 PAGE 2 of 2						Issue 1		Issue	ECN	Description										Sig	Date
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Hi-MO 6

Explorer

LR5-54HTH 415~435M

- Suitable for Distribution Market
- Simple design embodies modern style
- Better energy generation performance
- High-quality module guarantees long-term reliability

15

15-year Warranty for
Materials and Processing

25

25-year Warranty for Extra
Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730

ISO9001:2015: ISO Quality Management System

ISO14001: 2015: ISO Environment Management System

ISO45001: 2018: Occupational Health and Safety

IEC62941: Guideline for module design qualification and type approval

LONGi



22.3%
MAX MODULE
EFFICIENCY

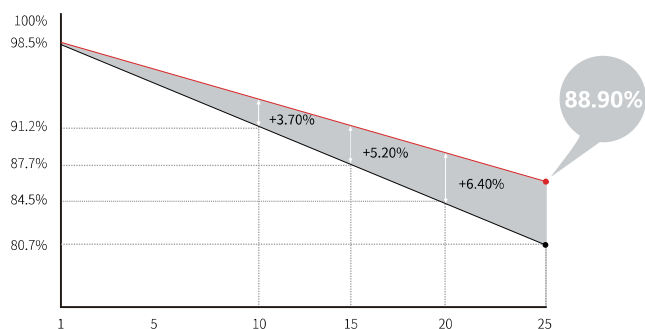
0~3%
POWER
TOLERANCE

<1.5%
FIRST YEAR
POWER DEGRADATION

0.40%
YEAR 2-25
POWER DEGRADATION

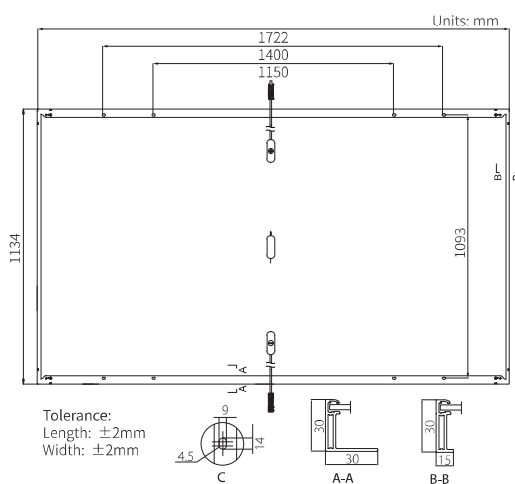
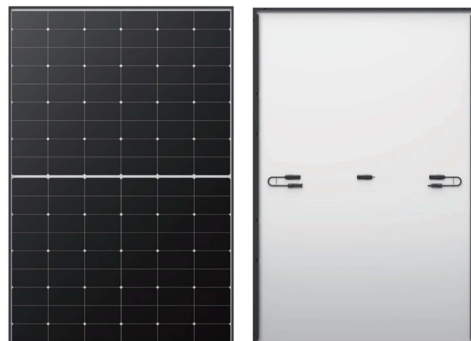
Additional Value

25-Year Power Warranty



Mechanical Parameters

Cell Orientation	108 (6×18)
Junction Box	IP68, three diodes
Output Cable	4mm ² , ±1200mm length can be customized
Glass	Single glass, 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight	20.8kg
Dimension	1722×1134×30mm
Packaging	36pcs per pallet / 216pcs per 20' GP / 936pcs per 40' HC



Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1m/s Test uncertainty for Pmax: ±3%

Module Type	LR5-54HTH-415M		LR5-54HTH-420M		LR5-54HTH-425M		LR5-54HTH-430M		LR5-54HTH-435M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	415	310	420	314	425	318	430	321	435	325
Open Circuit Voltage (Voc/V)	38.53	36.18	38.73	36.36	38.93	36.55	39.13	36.74	39.33	36.93
Short Circuit Current (Isc/A)	13.92	11.24	14.00	11.31	14.07	11.36	14.15	11.43	14.22	11.49
Voltage at Maximum Power (Vmp/V)	32.24	29.42	32.44	29.60	32.64	29.78	32.84	29.97	33.04	30.15
Current at Maximum Power (Imp/A)	12.88	10.54	12.95	10.60	13.03	10.67	13.10	10.72	13.17	10.78
Module Efficiency(%)	21.3		21.5		21.8		22.0		22.3	

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Fire Rating	UL type 1 or 2 IEC Class C

Mechanical Loading

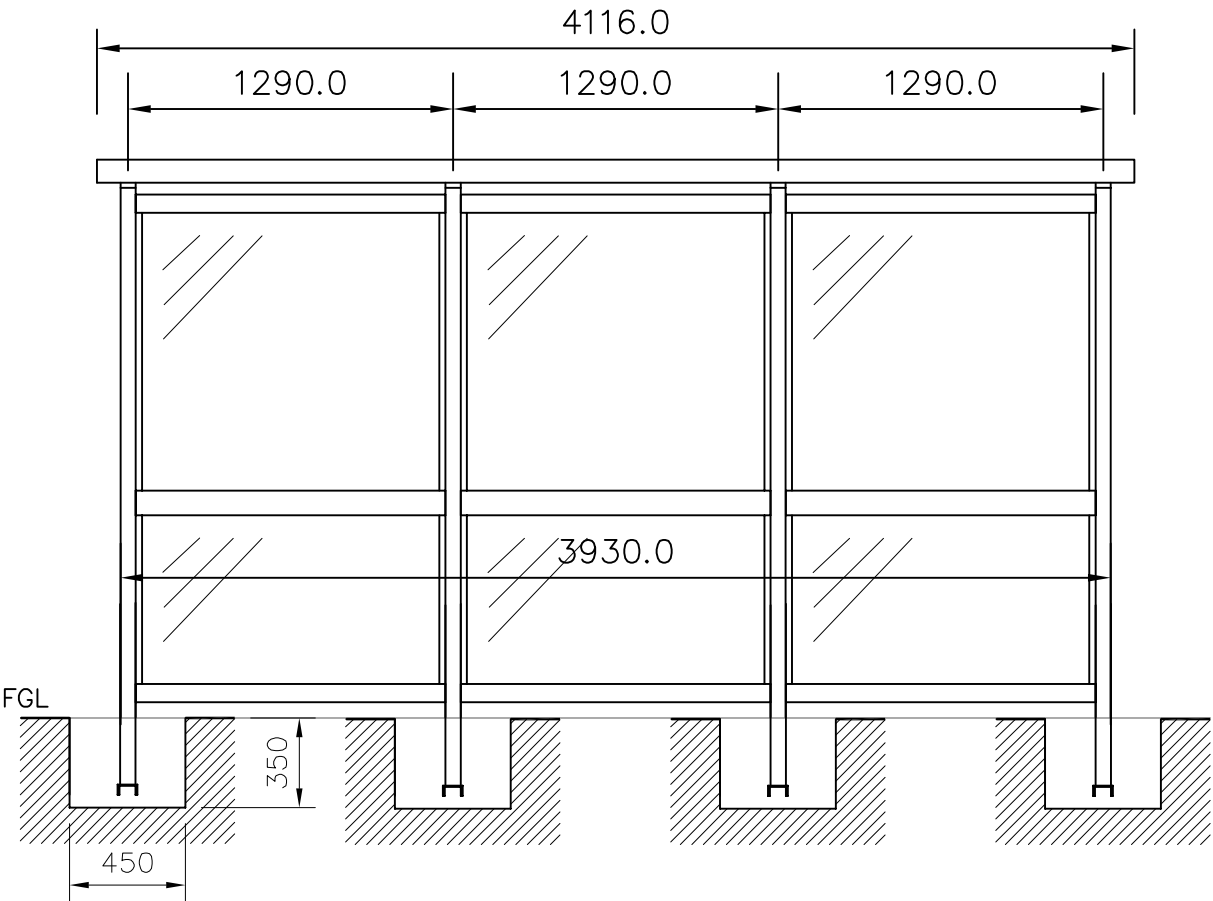
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

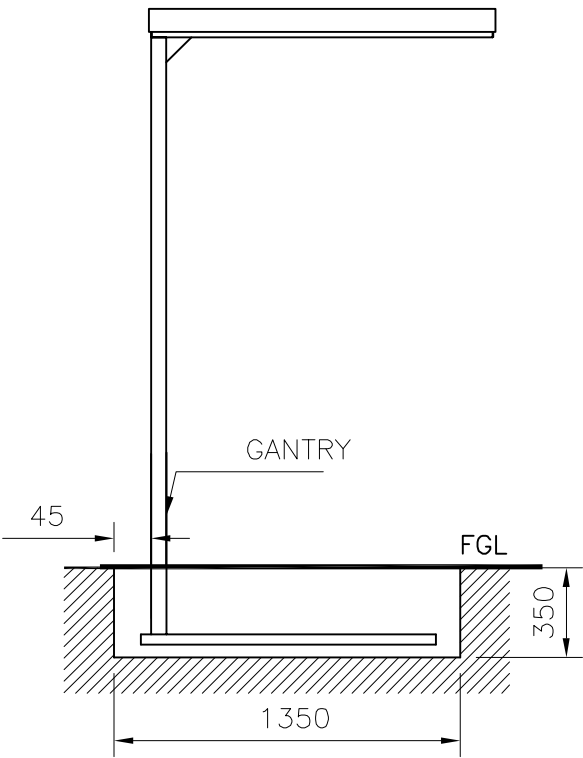
Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.230%/°C
Temperature Coefficient of Pmax	-0.290%/°C

3 Bay Shelter Foundation details

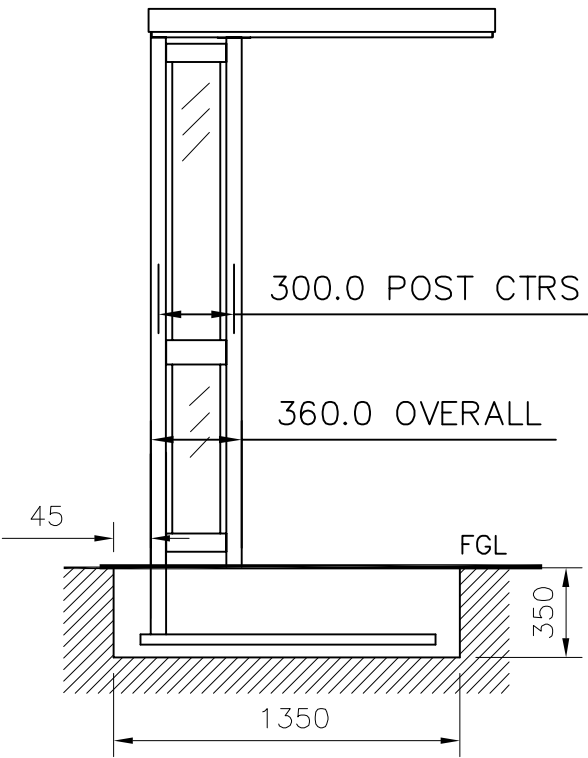
Elevation



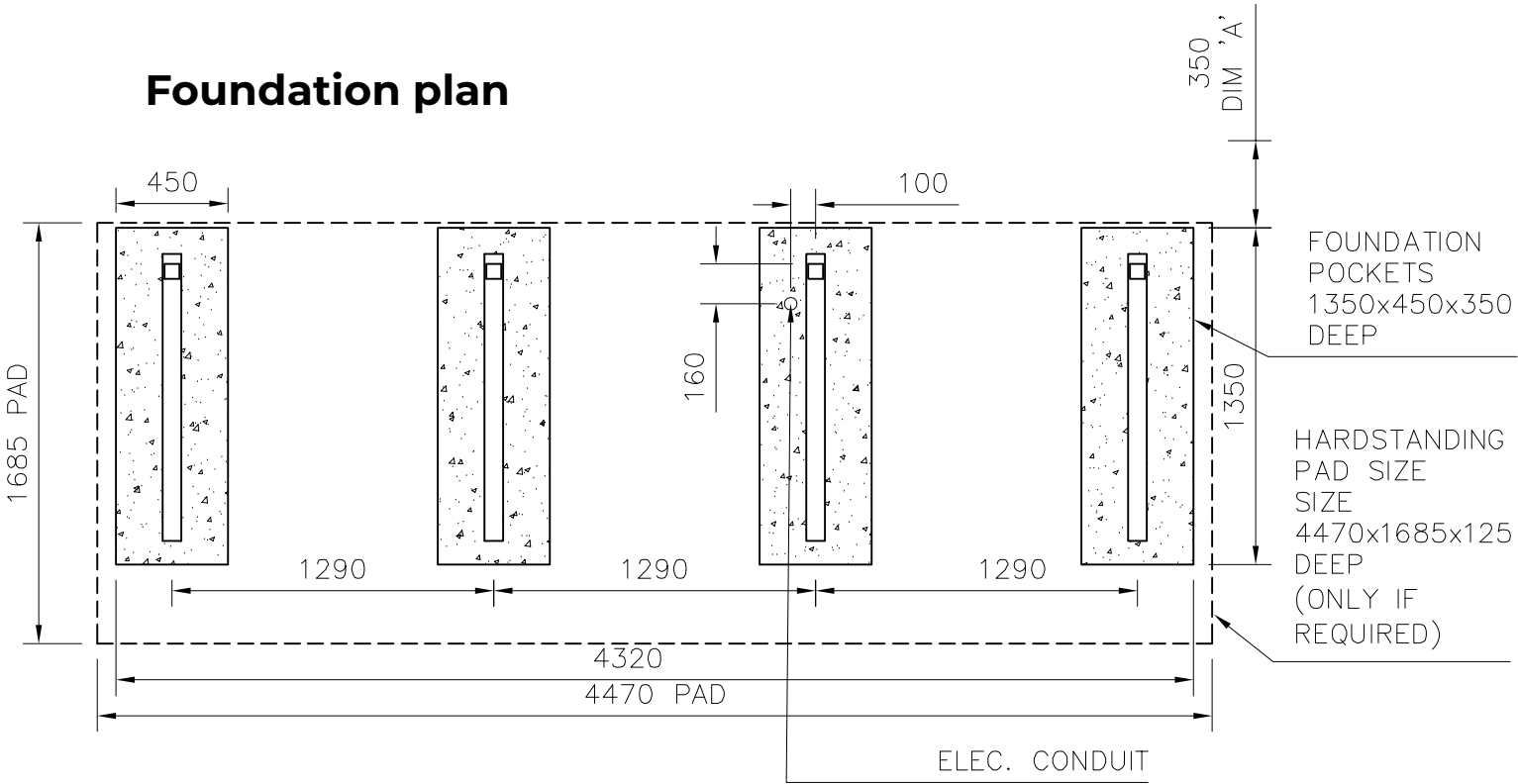
Cantilever with no end panels (NEP)



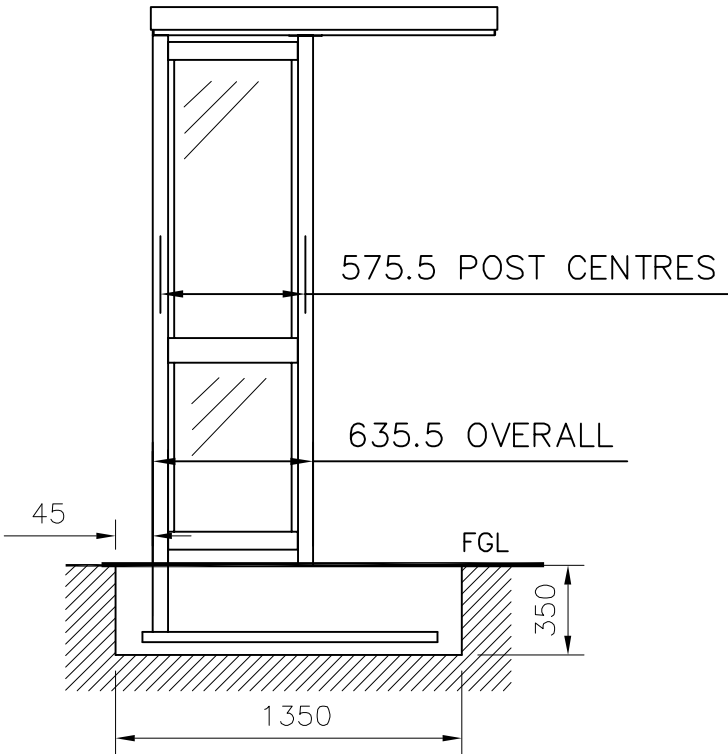
Cantilever with quarter end panels (QEP)



Foundation plan



Cantilever with half end panels (HEP)



Foundation pockets to dimensions shown back-filled with C20N/mm² concrete top of foundations to be set level to finished ground level or to allow for final reinstatement. Overall gradient of site should be no greater than 75mm

Foundation plan is for shelters with NEP, QEP & HEP

Minimum 1200mm pavement clearance is always required check with end panel sizes.