

“L” SYSTEM

OPEN CIRCUIT THERMOSIPHON SYSTEM

NOT SUITABLE FOR FROST OR HARSH WATER REGIONS. This system is suitable for *multiple installations*.



Auxiliary Boost Gas (Optional)
(Refer Section 12-1 to 12-2 for more details)
Type Fan Forced
Burner Rating 13 MJ/hr (3.6 kW)
Primary Voltage 220-250 Volts AC
Secondary Voltage 12 Volts DC

Orientation Chart & Guide

Refer to the Orientation Chart for details on orientation of the Solahart systems. For optimum performance the system should face the equator, at a pitch equal to the local latitude. The system should face the equator. In the Northern hemisphere, the system should face South and in the Southern hemisphere, the system should face North. For the Southern Hemisphere.

2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.
3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.
4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.
5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.
6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

'L' Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Black Polyester Powdercoat	
Absorber Material	Aluminium	
Riser Material	Copper	
Number of Risers	6	
Capacity	3.0	litres
Weight (full)	36.0	kg
Weight (empty)	33.0	kg
Working Pressure	850	kPa
Tray Material	0.7mm	Aluminium - Marine Grade
Tray Insulation	40mm Polyester blanket	
Collector Glass	3.2mm	Tempered Glass Low Iron

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.

Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C
Water Connections	Hot & Cold 20mm 3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

“L” SYSTEM

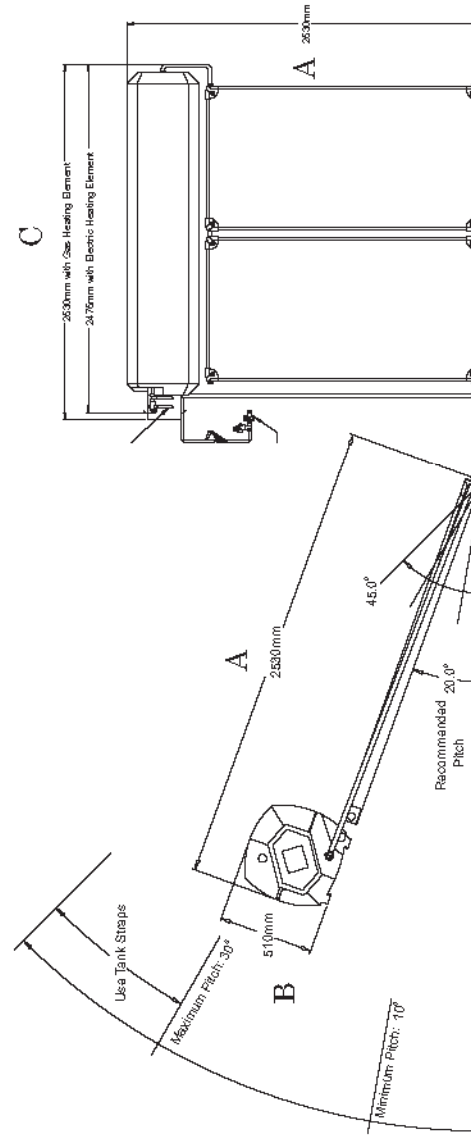
OPEN CIRCUIT THERMOSIPHON SYSTEM

NOT SUITABLE FOR FROST OR HARSH WATER REGIONS. This system is suitable for *multiple installations*.

Model	151L	181L	182L	221L	222L	301L	302L	303L	443L	444L
Number of Collectors	1	1	2	1	2	1	2	3	3	4
Storage Capacity	150 litres 40 US Gal	180 litres 48 US Gal	180 litres 48 US Gal	220 litres 58 US Gal	220 litres 58 US Gal	300 litres 80 US Gal	300 litres 80 US Gal	300 litres 80 US Gal	440 litres 116 US Gal	440 litres 116 US Gal
Delivery Capacity	128 litres 34.3 US Gal	160 litres 42.3 US Gal	160 litres 42.3 US Gal	200 litres 52.8 US Gal	200 litres 52.8 US Gal	240 litres 63.4 US Gal	280 litres 74 US Gal	285 litres 75.3 US Gal	400 litres 106 US Gal	400 litres 105.7 US Gal
Boost Recovery	110 litres 29.1 US Gal	153 litres 40.6 US Gal	150 litres 40.6 US Gal	184 litres 48.6 US Gal	184 litres 48.6 US Gal	246 litres 65 US Gal	246 litres 65 US Gal	246 litres 65 US Gal	359 litres 94.9 US Gal	320 litres 84.5 US Gal
Weight - Empty	49 kg 108 lbs	55 kg 121 lbs	55 kg 121 lbs	64 kg 141 lbs	64 kg 141 lbs	81 kg 179 lbs	81 kg 179 lbs	81 kg 179 lbs	124 kg 273 lbs	147 kg 324 lbs
Weight - Full	199 kg 439 lbs	239 kg 527 lbs	235 kg 518 lbs	284 kg 626 lbs	284 kg 626 lbs	381 kg 840 lbs	381 kg 840 lbs	381 kg 840 lbs	564 kg 1243 lbs	587 kg 1294 lbs
A - Length of System (Top to Bottom)	1.28 m 50.4 inches	2.45 m 96.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	3.28 m 129.3 inches	3.29 m 129.5 inches
B - Height of Tank (roof to top of tank)	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches
C - Width of System	0.51 m 20.1 inches	1.29 m 50.1 inches	1.48 m 58.5 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	3.16 m 124.4 inches	3.34 m 131.5 inches
Working Pressure	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi

Electric Boost Specifications	
Auxiliary Boost	Electric (fitted) 3.6kW
Current Draw	15 Amps
Optional Type	Electric Immersion Copper Sheath 1.8kW/2.4kW/4.8kW
Supply Voltage	220-250 AC

Hot Water Recovery Using Booster		
E L E C T R I C	Supply Voltage	Temperature Rise
	Volts AC	40C 50C 60C
kW	Amps	litres litres litres
1.8	8	39 31 26
2.4	11	52 41 34
3.6	17	77 62 52
4.8	22	103 83 69



“J” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations*.



'J' Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Black Polyester Powdercoat	
Absorber Material	Steel	
Type of Risers	Multi-Flow	
Number of Risers	35	
Capacity	3.0	litres
Weight (full)	46	kg
Weight (empty)	42	kg
Working Pressure	80	kPa
Tray Material	0.7mm Aluminium - Marine Grade	
Tray Insulation	55mm Polyester blanket	
Collector Glass	3.0mm Tempered Glass Low Iron	

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.

Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Auxiliary Boost Gas (Optional)
(Refer Section 12-1 to 12-2 for more details)

Type Fan Forced

Burner Rating 13 MJ/hr (3.6 kW)

Primary Voltage 220-250 Volts AC

Secondary Voltage 12 Volts DC

Orientation Chart & Guide

Refer to the Orientation Chart for details on orientation of the Solahart systems. For optimum performance the system should face the equator, at a pitch equal to the local latitude. The system should face the equator. In the Northern hemisphere, the system should face South and in the Southern hemisphere, the system should face North. For the Southern Hemisphere.

2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.

3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.

4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.

5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.

6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C Hot & Cold 20mm
Water Connections	3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

"J" SYSTEM

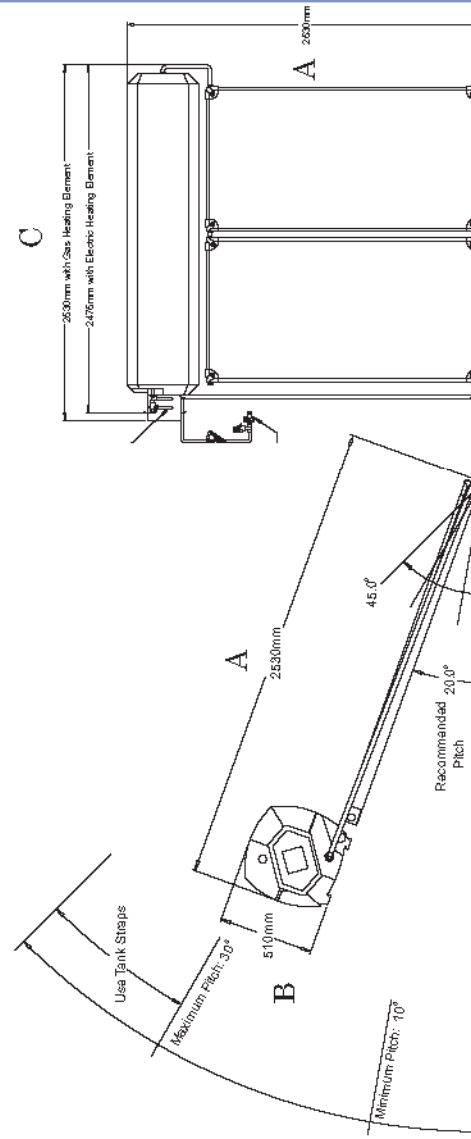
CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*

Model	151J	181J	182J	221J	222J	301J	302J	303J	443J	444J
Number of Collectors	1	1	2	1	2	1	2	3	3	4
Storage Capacity	150 litres 40 US Gal	180 litres 48 US Gal	180 litres 48 US Gal	220 litres 59 US Gal	220 litres 58 US Gal	300 litres 80 US Gal	300 litres 80 US Gal	300 litres 80 US Gal	440 litres 116 US Gal	440 litres 116 US Gal
Delivery Capacity	130 litres 34.3 US Gal	160 litres 42.3 US Gal	160 litres 42.3 US Gal	200 litres 52.8 US Gal	180 litres 52.8 US Gal	240 litres 63.4 US Gal	280 litres 74 US Gal	285 litres 75.3 US Gal	400 litres 105.7 US Gal	400 litres 105.7 US Gal
Boost Recovery	128 litres 34 US Gal	153 litres 40.6 US Gal	153 litres 40.6 US Gal	184 litres 48.6 US Gal	184 litres 48.6 US Gal	246 litres 65 US Gal	246 litres 65 US Gal	246 litres 65 US Gal	320 litres 84.5 US Gal	320 litres 84.5 US Gal
Weight - Empty	49 kg 108 lbs	65 kg 143 lbs	65 kg 143 lbs	77 kg 170 lbs	77 kg 170 lbs	98 kg 216 lbs	98 kg 216 lbs	98 kg 216 lbs	147 kg 324 lbs	147 kg 324 lbs
Weight - Full	199 kg 439 lbs	256 kg 564 lbs	246 kg 540 lbs	297 kg 655 lbs	297 kg 655 lbs	347 kg 765 lbs	347 kg 765 lbs	347 kg 765 lbs	494 kg 1087 lbs	494 kg 1087 lbs
A - Length of System (Top to Bottom)	1.28 m 50.4 inches	1.49 m 58.8 inches	1.49 m 58.8 inches	1.87 m 73.6 inches	1.87 m 73.6 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.48 m 97.8 inches	2.48 m 97.8 inches
B - Height of Tank (roof to top of tank)	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches
C - Width of System	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches
Working Pressure	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi

Electric Boost Specifications	
Auxiliary Boost	Electric (fitted)
Current Draw	15 Amps
Optional Type	Electric Immersion Copper Sheath
Supply Voltage	220-250 AC

Hot Water Recovery Using Booster			
E L E C T R I C	Supply Voltage	Current Draw	Temperature Rise
	Volts AC	Amps	litres / litres
C	220-250	8	39 / 31
T	220-250	11	52 / 41
R	220-250	17	77 / 62
I	220-250	22	103 / 83



“K_F” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations*.



‘K_f’ Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Chrome Black	
Absorber Material	Steel	
Type of Risers	Multi-Flow	
Number of Risers	35	
Capacity	3.5	litres
Weight (full)	46	kg
Weight (empty)	42	kg
Working Pressure	80	kPa
Tray Material	0.7mm Aluminium - Marine Grade	
Tray Insulation	40mm Fibreglass Blanket	
Collector Glass	3.2mm Tempered Glass Low Iron	

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.

Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Auxiliary Boost Gas (Optional)
(Refer Section 12-1 to 12-2 for more details)

Type Fan Forced

Burner Rating 13 MJ/hr (3.6 kW)

Primary Voltage 220-250 Volts AC

Secondary Voltage 12 Volts DC

Orientation Chart & Guide

Refer to the Orientation Chart for details on orientation of the Solahart systems. For optimum performance the system should face the equator, at a pitch equal to the local latitude. The system should face the equator. In the Northern hemisphere, the system should face South and in the Southern hemisphere, the system should face North. For the Southern Hemisphere.

2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.

3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.

4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.

5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.

6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C Hot & Cold 20mm
Water Connections	3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

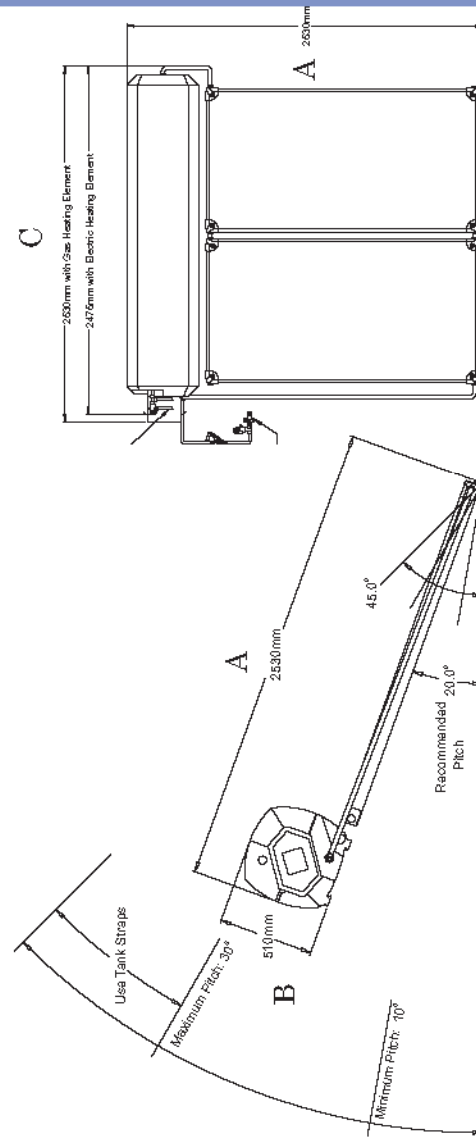
The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

"K_F" SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*

Model	151K _F	181K _F	182K _F	221K _F	222K _F	301K _F	302K _F	303K _F	443K _F	444K _F
Number of Collectors	1	1	2	1	2	1	2	3	3	4
Storage Capacity	150 litres US Gal. 40	180 litres US Gal. 48	180 litres US Gal. 48	220 litres US Gal. 58	220 litres US Gal. 59	300 litres US Gal. 80	300 litres US Gal. 80	300 litres US Gal. 80	440 litres US Gal. 116	440 litres US Gal. 116
Delivery Capacity	130 litres US Gal. 34.3	160 litres US Gal. 42.3	160 litres US Gal. 42.3	200 litres US Gal. 52.8	180 litres US Gal. 47.5	240 litres US Gal. 63.4	280 litres US Gal. 74	285 litres US Gal. 75.3	400 litres US Gal. 105.7	400 litres US Gal. 105.7
Boost Recovery	128 litres US Gal. 34	153 litres US Gal. 40.6	153 litres US Gal. 40.6	184 litres US Gal. 48.6	175 litres US Gal. 47	246 litres US Gal. 65	246 litres US Gal. 65	246 litres US Gal. 65	320 litres US Gal. 84.5	320 litres US Gal. 84.5
Weight - Empty	62 kg lbs 136	102 kg lbs 224	66 kg lbs 145	123 kg lbs 271	78 kg lbs 170	152 kg lbs 334	99 kg lbs 216	99 kg lbs 216	228 kg lbs 503	148 kg lbs 324
Weight - Full	212 kg lbs 466	256 kg lbs 564	246 kg lbs 541	298 kg lbs 655	298 kg lbs 655	380 kg lbs 836	399 kg lbs 877	399 kg lbs 877	552 kg lbs 1217	588 kg lbs 1294
A - Length of System (Top to Bottom)	1.28 m inches 50.4	2.48 m inches 98.5	1.49 m inches 58.8	2.48 m inches 98.5	1.87 m inches 74.3	2.48 m inches 98.5	2.31 m inches 91	2.48 m inches 91	2.48 m inches 91	2.48 m inches 91
B - Height of Tank (roof to top of tank)	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1	0.51 m inches 20.1
C - Width of System	1.29 m inches 50.1	1.49 m inches 58.5	1.49 m inches 58.5	1.76 m inches 69.3	1.76 m inches 69.3	2.48 m inches 98.5	2.31 m inches 90.9	2.48 m inches 98.5	2.31 m inches 90.9	2.48 m inches 98.5
Working Pressure	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145	1000 kPa psi 145



Electric Boost Specifications		
Auxiliary Boost	Electric (fitted)	3.6kW
Current Draw	15 Amps	
Optional Type	Electric Immersion Copper Sheath	1.8kW, 2.4kW, 4.8kW
Supply Voltage	220-250 AC	

Hot Water Recovery Using Booster			
ELETC	Supply Voltage	Current Draw	Temperature Rise
			40C
ELETC	Volts AC	Amps	50C
			litres
ELETC	220-250	8	litres
			litres
ELETC	220-250	11	31
			litres
ELETC	220-250	17	41
			litres
ELETC	220-250	22	52
			litres
ELETC	220-250	22	62
			litres
ELETC	220-250	22	83
			litres

“FREE HEAT” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*



'Kf' Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Chrome Black	
Absorber Material	Steel	
Type of Risers	Multi-Flow	
Number of Risers	35	
Capacity	3.5	litres
Weight (full)	46	kg
Weight (empty)	42	kg
Working Pressure	80	kPa
Tray Material	0.7mm Aluminium - Marine Grade	
Tray Insulation	40mm Fibreglass Blanket	
Collector Glass	3.2mm Tempered Glass Low Iron	

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.
Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Auxiliary Boost Gas (Optional)
 (Refer Section 12-1 to 12-2 for more details)

Type Fan Forced

Burner Rating 13 MJ/hr (3.6 kW)

Primary Voltage 220-250 Volts AC

Secondary Voltage 12 Volts DC

Orientation Chart & Guide

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2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.

3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.

4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.

5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.

6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C Hot & Cold 20mm
Water Connections	3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

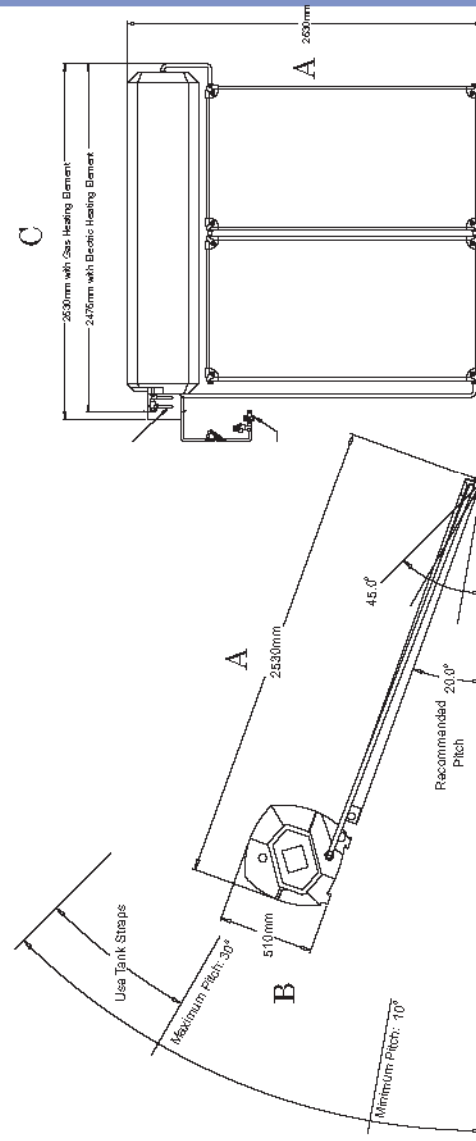
The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

“FREE HEAT” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*

Model	181Free Heat	182Free Heat	221Free Heat	222Free Heat	301Free Heat	302Free Heat	303Free Heat	443Free Heat	444Free Heat
Number of Collectors	1	2	1	2	1	2	3	3	4
Storage Capacity	180 litres US Gal 48	180 litres US Gal 48	220 litres US Gal 58	220 litres US Gal 59	300 litres US Gal 80	300 litres US Gal 80	300 litres US Gal 80	440 litres US Gal 116	440 litres US Gal 116
Delivery Capacity	160 litres US Gal 42.3	160 litres US Gal 42.3	200 litres US Gal 52.8	180 litres US Gal 47.6	240 litres US Gal 63.4	280 litres US Gal 74	285 litres US Gal 75.3	400 litres US Gal 105.7	400 litres US Gal 105.7
Boost Recovery	153 litres US Gal 40.6	153 litres US Gal 40.6	184 litres US Gal 48.6	175 litres US Gal 47	175 litres US Gal 47	246 litres US Gal 65	246 litres US Gal 65	320 litres US Gal 84.5	320 litres US Gal 84.5
Weight - Empty	66 kg 145 lbs	107 kg 236 lbs	78 kg 170 lbs	152 kg 334 lbs	99 kg 216 lbs	144 kg 317 lbs	99 kg 216 lbs	148 kg 324 lbs	148 kg 324 lbs
Weight - Full	246 kg 541 lbs	291 kg 641 lbs	298 kg 655 lbs	347 kg 765 lbs	380 kg 836 lbs	448 kg 987 lbs	399 kg 877 lbs	552 kg 1217 lbs	588 kg 1294 lbs
A - Length of System (Top to Bottom)	1.49 m 58.8 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.48 m 98.5 inches	2.31 m 91 inches	2.48 m 98.5 inches	2.31 m 91 inches	2.48 m 98.5 inches	2.48 m 98.5 inches
B - Height of Tank (roof to top of tank)	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches	0.51 m 20.1 inches
C - Width of System	1.49 m 58.5 inches	2.31 m 90.9 inches	1.76 m 69.3 inches	2.37 m 92.4 inches	2.48 m 98.7 inches	2.31 m 90.9 inches	2.31 m 90.9 inches	2.48 m 98.7 inches	2.48 m 98.7 inches
Working Pressure	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi	1000 kPa 145 psi



Electric Boost Specifications	
Auxiliary Boost	Electric (fitted) 3.6kW
Current Draw	15 Amps
Optional Type	Electric Immersion Copper Sheath 1.8kW, 2.4kW, 4.8kW
Supply Voltage	220-250 AC

Hot Water Recovery Using Booster			
E L E C T R I C	Supply Voltage	Current Draw	Temperature Rise
	Volts AC	Amps	litres / litres
C	220-250	8	39 31 26
T	220-250	11	52 41 34
R	220-250	17	77 62 52
I	220-250	22	103 83 69

“BCXII” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*



'Kf' Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Chrome Black	
Absorber Material	Steel	
Type of Risers	Multi-Flow	
Number of Risers	35	
Capacity	3.5	litres
Weight (full)	46	kg
Weight (empty)	42	kg
Working Pressure	80	kPa
Tray Material	0.7mm Aluminium - Marine Grade	
Tray Insulation	40mm Fibreglass Blanket	
Collector Glass	3.2mm Tempered Glass Low Iron	

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.

Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Auxiliary Boost Gas (Optional)
(Refer Section 12-1 to 12-2 for more details)

Type Fan Forced

Burner Rating 13 MJ/hr (3.6 kW)

Primary Voltage 220-250 Volts AC

Secondary Voltage 12 Volts DC

Orientation Chart & Guide

Refer to the Orientation Chart for details on orientation of the Solahart systems. For optimum performance the system should face the equator, at a pitch equal to the local latitude. The system should face the equator. In the Northern hemisphere, the system should face South and in the Southern hemisphere, the system should face North. For the Southern Hemisphere.

2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.

3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.

4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.

5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.

6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C
Water Connections	Hot & Cold 20mm 3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

"BCXII" SYSTEM

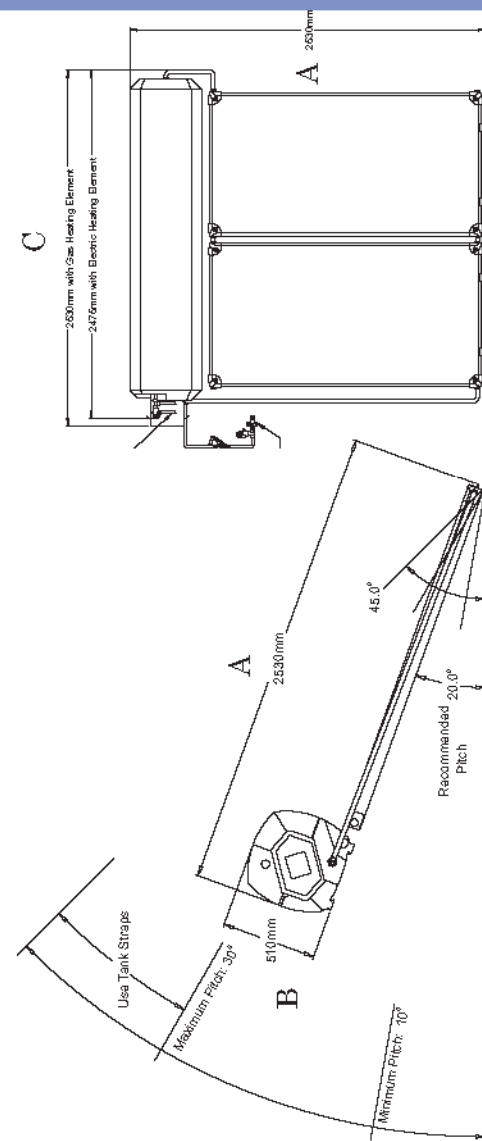
CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*

Model	151BCXII	181BCXII	182BCXII	221BCXII	222BCXII	301BCXII	302BCXII	303BCXII	443BCXII	444BCXII
Number of Collectors	1	1	2	1	2	2	1	2	3	4
Storage Capacity	litres US Gal	150 40	180 48	220 59	220 59	300 80	300 80	300 80	440 116	440 116
Delivery Capacity	litres US Gal	130 34.3	160 42.3	200 52.8	200 52.8	240 63.4	280 74	285 74.3	400 105.7	400 105.7
Boost Recovery	litres US Gal	110 29	153 40.6	153 40.6	184 48.6	175 47	246 65	246 65	320 84.5	320 84.5
Weight - Empty	kg lbs	62 136	102 224	106 238	124 273	152 334	145 320	187 412	229 505	302 666
Weight - Full	kg lbs	212 446	256 563	246 540	338 745	348 767	380 836	449 990	552 1217	741 1633
A - Length of System (Top to Bottom)	m inches	1.28 50.4	2.48 96.5	2.48 96.5	2.48 96.5	2.48 96.5	2.48 96.5	2.48 96.5	2.48 96.5	2.48 96.5
B - Height of Tank (roof to top of tank)	m inches	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1
C - Width of System	m inches	0.51 20.1	1.29 50.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1	0.51 20.1
Working Pressure	kPa psi	1000 145	1000 145	1000 145	1000 145	1000 145	1000 145	1000 145	1000 145	1000 145

Electric Boost Specifications	
Auxiliary Boost	Electric (fitted)
Current Draw	16 Amps
Optional Type	Electric Immersion Copper Sheath
Supply Voltage	220-250 AC

Hot Water Recovery Using Booster				
ELETC	Supply Voltage Volts AC	Current Draw Amps	Temperature Rise	
			40C litres	50C litres
1.8	220-250	8	39	26
2.4	220-250	11	52	34
3.6	220-250	17	77	52
4.8	220-250	22	103	69



“J FREE HEAT” SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations*.



‘J’ Collector

Aperture (heating) Area	1.87	m ²
Length	1937	mm
Width	1022	mm
Height	77	mm
Absorber Surface	Black Polyester Powdercoat	
Absorber Material	Steel	
Type of Risers	Multi-Flow	
Number of Risers	35	
Capacity	3.0	litres
Weight (full)	46	kg
Weight (empty)	42	kg
Working Pressure	80	kPa
Tray Material	0.7mm Aluminium - Marine Grade	
Tray Insulation	55mm Polyester blanket	
Collector Glass	3.0mm Tempered Glass Low Iron	

Flat Roof Installation: for flat roof installations use the Variable Pitch Frame, where the inclination can be set to 15°, 20°, 25°. Refer to Installation Methods Section for more details on Variable Pitch Frames.

Cyclone, Hurricane or Typhoon Prone Areas: refer to Mounting Frames section for more details on Cyclone rated frames.

Inclination: for self cleaning of glass, a minimum angle of 10° is mandatory.

Shading: the collectors should be free from shading.

Clearance: the collectors should be free from any obstructions on all sides for a minimum distance of 500mm.

Electric Boost: Must comply with local Electrical Codes. Single phase 220-250 volts, minimum 15 amps. For higher current rating refer table overleaf.

Gas Supply: Must comply with local gas regulations. Gas supply to suit Operating Pressures of 1.0 kPa with Natural Gas and 2.75 kPa with LPG.

Stove Coil Connection:

- This system is suitable for connecting the potable circuit to a stove coil, to operate on both mains pressure and low pressure.

- Refer to Installation Methods section for more details.

Auxiliary Boost Gas (Optional)
(Refer Section 12-1 to 12-2 for more details)

Type Fan Forced

Burner Rating 13 MJ/hr (3.6 kW)

Primary Voltage 220-250 Volts AC

Secondary Voltage 12 Volts DC

Orientation Chart & Guide

Refer to the Orientation Chart for details on orientation of the Solahart systems. For optimum performance the system should face the equator, at a pitch equal to the local latitude. The system should face the equator. In the Northern hemisphere, the system should face South and in the Southern hemisphere, the system should face North. For the Southern Hemisphere.

2. If the roof is facing between 45° East or 45° West install the system on the pitch of the roof.

3. If the roof is facing between 45° and 135°, install the system on a Fixed Pitch Frame on a side pitch.

4. If the roof is facing between 135° and 225°, install the system on a Fixed Pitch Frame on a reverse pitch.

5. If the roof is facing between 225° and 270°, it is preferable to add an extra collector instead of installing on a Fixed Pitch Frame on a side pitch.

6. If the roof is facing between 270° and 315°, install the system on a Fixed Pitch Frame on a side pitch.

Water Connection Specification

Potable Water Connections	Suitable for Mains Pressure
Cold Water Expansion Valve (not supplied)	850 kPa
Maximum Mains Supply Pressure:	680 kPa
With Cold Water Expansion Valve	800 kPa
Without Cold Water Expansion Valve	1000 kPa
Temperature & Pressure Relief Valve (supplied)	99C
Water Connections	Hot & Cold 20mm 3/4"

Temperature & Pressure Relief Valve

This valve is set to relieve at 1,000 kPa and/or when the water temperature reaches 99C. It is supplied with the system and must be fitted or the warranty will be void.

Cold Water Relief Valve

It is a legal requirement in some areas that a Cold Water Relief Valve is fitted, so please consult your local plumbing code.

It is a condition of the warranty that a Cold Water Relief Valve is fitted as standard where the water saturation index exceeds +0.4

Anode

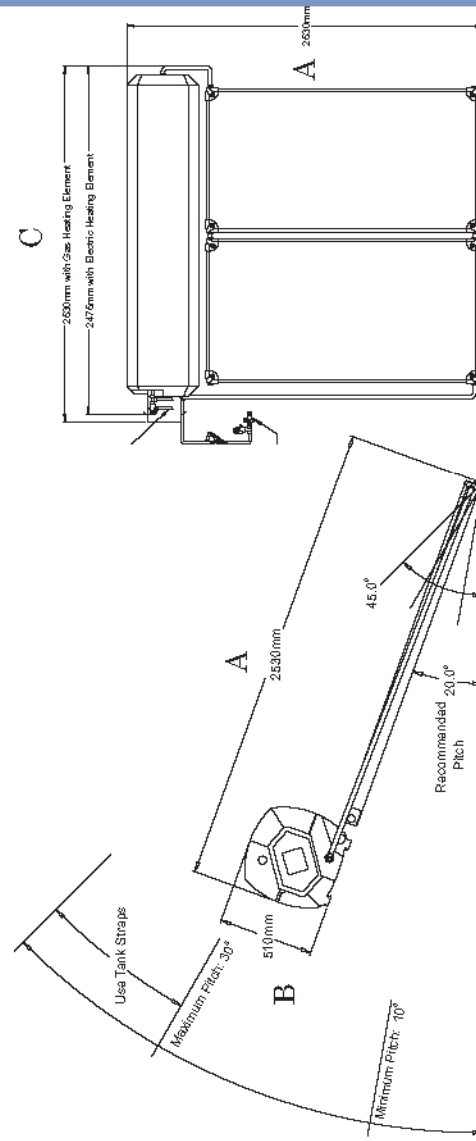
The correct anode type for the water supply being used must be fitted in the water heater. The unit comes standard with a Magnesium Anode that is suitable for water supplies with a Total Dissolved Solids of 40-600mg/l.

"J FREE HEAT" SYSTEM

CLOSED CIRCUIT THERMOSIPHON SYSTEM

This system is suitable for *multiple installations.*

Model	181J Free Heat		182J Free Heat		221J Free Heat		222J Free Heat		301J Free Heat		302J Free Heat		303J Free Heat		443J Free Heat		444J Free Heat	
	Tank	System	Tank	System	Tank	System	Tank	System	Tank	System	Tank	System	Tank	System	Tank	System	Tank	System
Number of Collectors	180	1	180	2	220	1	220	2	300	1	300	2	300	3	440	3	440	4
Storage Capacity	48 US Gal		48 US Gal		59 US Gal		59 US Gal		80 US Gal		80 US Gal		80 US Gal		116 US Gal		116 US Gal	
Delivery Capacity	160 litres		160 litres		200 litres		200 litres		240 litres		280 litres		285 litres		400 litres		400 litres	
Solar	42.3 US Gal		42.3 US Gal		52.8 US Gal		52.8 US Gal		63.4 US Gal		74 US Gal		75.3 US Gal		105.7 US Gal		105.7 US Gal	
Boost Recovery	135 litres		135 litres		184 litres		184 litres		246 litres		246 litres		246 litres		320 litres		320 litres	
4.8kW (40C rise)	36 US Gal		36 US Gal		48.6 US Gal		48.6 US Gal		65 US Gal		65 US Gal		65 US Gal		84.5 US Gal		84.5 US Gal	
Weight - Empty	66 kg		65 kg		78 kg		78 kg		99 kg		99 kg		99 kg		148 kg		148 kg	
	143 lbs		143 lbs		170 lbs		170 lbs		216 lbs		216 lbs		216 lbs		324 lbs		324 lbs	
Weight - Full	246 kg		245 kg		298 kg		298 kg		389 kg		389 kg		389 kg		588 kg		588 kg	
	540 lbs		540 lbs		655 lbs		655 lbs		877 lbs		877 lbs		877 lbs		1294 lbs		1294 lbs	
A - Length of System (Top to Bottom)	1.49 m		1.49 m		1.87 m		1.87 m		2.31 m		2.31 m		2.31 m		3.28 m		3.28 m	
	58.8 inches		58.8 inches		74.4 inches		74.4 inches		91.1 inches		91.1 inches		91.1 inches		129.1 inches		129.1 inches	
B - Height of Tank (roof to top of tank)	0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m	
	20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches	
C - Width of System	0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m		0.51 m	
	20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches		20.1 inches	
Working Pressure	1000 kPa		1000 kPa		1000 kPa		1000 kPa		1000 kPa		1000 kPa		1000 kPa		1000 kPa		1000 kPa	
	145 psi		145 psi		145 psi		145 psi		145 psi		145 psi		145 psi		145 psi		145 psi	



Electric Boost Specifications		Temperature Rise	
Auxiliary Boost	Electric (fitted)	40C	50C
Current Draw	16 Amps	litres	litres
Optional	Electric	8	31
Type	Immersion	11	41
	Copper Sheath	17	62
Supply Voltage	220-250 AC	22	83

Hot Water Recovery Using Booster			
Supply Voltage	Current Draw	Temperature Rise	
Volts AC	Amps	40C	50C
kW	litres	litres	litres
1.8	220-250	8	31
2.4	220-250	11	41
3.6	220-250	17	62
4.8	220-250	22	83